SAMSUNG

User Manual

Memory Camcorder

www.samsung.com/register

SMX-C20BN/SMX-C20RN/SMX-C20LN/SMX-C20UN
SMX-C24BN/SMX-C24RN/SMX-C24LN/SMX-C24UN
SMX-C200BN/SMX-C200RN/SMX-C200LN/SMX-C200UN

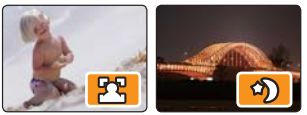
key features of your memory camcorder

High-resolution Color Widescreen LCD (2.7” WIDE TFT LCD)

Samsung memory camcorder has a 2.7-inch 230k pixel Widescreen LCD which provides bright and clear monitoring. In addition, the LCD Enhancer adjusts screen color and brightness to the screen lighting conditions, giving you better monitoring under strong sunlight.

Easy custom scene shooting

In Smart Auto mode, you can record high quality images easily and conveniently without having to reset modes manually to adjust for changing conditions.



H.264/AVC (MPEG4 part 10/Advanced Video Coding) Encoding

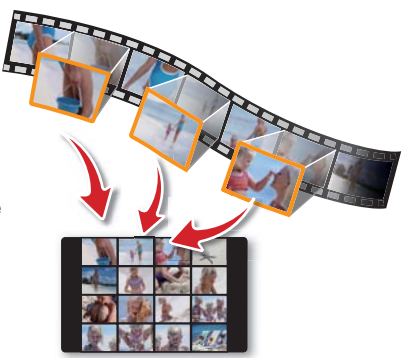
Your camcorder uses the latest video compression technology, H.264. H.264's high compression rate sharply increases recordable time within the same sized storage media.

High quality images through Mobile DNIe

The Samsung memory camcorder has 3DNR (3-dimensional noise reduction), high-sensitivity color expression (intelligent color expression), High performance Anti-Shake (Hyper DIS), and automatic face detection features.

Video digests and storyboard printing

The Digest/Storyboard function captures 16 still images from the video you select and saves the images to the storage media. You get a quick overview of your video - a real help when you want to review a video quickly.



Quick storyboard previews with the iVIEW button

Press the iView button to preview your storyboards before printing them. It's a quick and easy way to see a digest of what you've recorded without having to view the whole video.

Time lapse recording for catching the moment

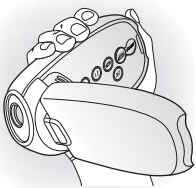
Time lapse recording lets you capture the blooming of flowers or the passage of clouds like the pros. Use this function to make artistic recordings, educational programs, or documentary videos.

Twice the memory options (SMX-C24 only)

The memory camcorder's external memory slot accepts high capacity SDHC cards.
In addition, the SMX-C24 has a built-in, high capacity,16 MB fl ash memory for recording videos or photos. Play and transfer videos or photos quickly and easily using the memory type of your choice.

Comfortable, Ergonomic Design

Your camcorder is designed for comfort, especially when you make long recordings. With this ergonomic design, you can shoot subjects comfortably from any position.



Direct upload of your videos to your PC and the Web

Intelli-studio built-in editing software installs directly from your camcorder to your PC when you connect the camcorder to your PC via USB cable. Using Intelli-studio, you can upload your videos and photos to your PC with ease and upload them directly to YouTube, Flickr or Facebook. Sharing videos with your friends and family is simpler than ever.

Direct upload to YouTube with the easy Share button

Select and upload your recordings to YouTube in one simple operation.

before reading this user manual

SAFETY WARNINGS

What the icons and signs in this user manual mean;

WARNING	Death or risk of serious personal injury.
CAUTION	Potential risk of personal injury or material damage.
CAUTION	To reduce the risk of fire, explosion, electric shock, or personal injury when using your camcorder, follow these basic safety precautions:
	Hints or referential pages that may be helpful when operating the camcorder.

These warning signs are here to prevent injury to you and others.
Please follow them explicitly. After reading this section, keep it in a safe place for future reference.

PRECAUTIONS

Warning!

- When using the AC power adapter with your camcorder, connect the adapter to an outlet with protective grounding.
- Do not expose the camcorder battery to direct sunlight, heaters, radiators, fire, or any other source of excessive heat.

Caution

If you replace the battery with the wrong battery, you can cause an explosion.
Replace the battery with the same battery or an equivalent type.

If you plug the AC adapter into a 240V AC outlet, be sure to use a suitable plug adapter.

Important information on use

Before using this camcorder

- **This camcorder is designed exclusively for use with the high-capacity built-in flash memory 16GB (SMX-C24 only) and an external memory card.**
- **This camcorder records video in H.264/AVC (MPEG4 part 10/Advanced Video Coding) format compliant with the Standard resolution (SD-VIDEO) format.**
- **Please note that this camcorder is not compatible with other digital video formats.**
- **Before recording important video, make a trial recording.**
  - Play back your trial recording to make sure the video and audio have been recorded properly.
- **The recorded contents cannot be compensated for:**
  - Samsung cannot compensate for any damages caused when recording is not made normally or recorded contents cannot be played back because of a defect in the camcorder or memory card. Also, Samsung cannot be held responsible for your recorded video and audio.
  - Recorded contents may be lost due to an error when handling this camcorder or memory card, etc. Samsung shall not be held responsible for the loss of recorded contents, and cannot compensate for any damages.
- **Make a backup of important recorded data.**
  - Protect your important recorded data by copying the files to a PC. We recommend copying the data to your PC or other recording media for storage. Refer to the software installation and USB connection guide.
- **Copyright: Please note that this camcorder is intended for consumer use only.**
  - Data recorded on a card in this camcorder from other digital/analog media or devices is protected by the copyright act and cannot be used without permission of the copyright owner except for personal enjoyment. Even if you record an event such as a show, performance or exhibition for personal enjoyment, it is strongly recommended that you obtain permission beforehand.

Important notes

- **Handle the liquid crystal display (LCD) with care:**
  - The LCD is a very delicate display device: Do not press its surface with excessive force, hit it, or prick it with a sharp object.
  - If you push the LCD surface, display uneveness may occur.
    If unevenness does not disappear, turn the camcorder off, wait for a few moments, and then turn it on again.
  - Do not place the camcorder with the open LCD screen down.
  - Close the LCD monitor when not using the camcorder.

Important information on use

- **Liquid crystal display:**
  - The LCD screen is a product of high precision technology. Out of the total pixels (approx. 230,000 pixels of an LCD monitor), 0.01% or less pixels may be out (black dots) or may remain lit as colored dots (red, blue, and green). This shows the limitations of the current technology, and does not indicate a fault that will interfere with recording.
  - The LCD screen will be slightly dimmer than usual when the camcorder is cold, for example, when outside in late fall, or right after the power is turned on. Normal brightness will be restored when the temperature inside the camcorder rises. Note that this will have no effect on the image in a storage media, so there is no cause for concern.
- **Hold the camcorder correctly:**
  - Do not hold the camcorder by the LCD monitor when lifting it. The LCD monitor could detach and the camcorder could fall.
- **Do not subject the camcorder to impact:**
  - This camcorder is a precision machine. Take great care that you do not strike it against a hard object or let it fall.
  - Do not use the camcorder on a tripod in a place where it is subject to severe vibrations or impact.
- **No sand or dust!**
  - Fine sand or dust entering the camcorder or AC power adaptor could cause malfunctions or defects.
- **No water or oil!**
  - Water or oil entering the camcorder or AC power adaptor could cause electric shock, malfunctions or defects.
- **Heat on surface of product:**
  - The surface of the camcorder will be slightly warm when used, but this does not indicate a fault.
- **Be careful of unusual ambient temperature:**
  - Using the camcorder in a place where the temperature is over 104°F (40°C) or lower than 32°F (0°C) may result in abnormal recording/playback.
  - Do not leave the camcorder on a beach or in a closed vehicle where the temperature is very high for a long time. This could cause a malfunction.
- **Do not point directly at the sun:**
  - If direct sunlight strikes the lens, the camcorder could malfunction or a fire could occur.
  - Do not leave the camcorder with the LCD screen exposed to direct sunlight. This could cause a malfunction.
- **Do not use the camcorder near a working TV or radio:**
  - This could cause noise to appear on the TV screen or in radio broadcasts.
- **Do not use the camcorder near strong radio waves or a strong magnetic field:**
  - If the camcorder is used near strong radio waves or a strong magnetic field such as that near a radio transmitter tower or electric appliance, noise could enter the video and audio your are recording. During playback of normally recorded video and audio, noise may also be present in picture and sound.
- **Do not expose the camcorder to soot or steam:**
  - Thick soot or steam could damage the camcorder case or cause a malfunction.

- **Do not use the camcorder near corrosive gas:**
  - If the camcorder is used in a place where there is dense exhaust gas generated by gasoline or diesel engines, or corrosive gas such as hydrogen sulphide, the external or internal terminals could corrode, disabling normal operation, or the battery connection terminals could corrode, so that the camcorder will not turn on.
- **Do not use the camcorder near an ultrasonic humidifier:**
  - Calcium and other chemicals dissolved in water could scatter in the air, and white particles could adhere to the optical head of the camcorder which could cause it to operate abnormally.
- **Do not clean the camcorder body with benzene or thinner:**
  - The exterior coating could peel off or the case surface could deteriorate.
  - When using a chemical cleaning cloth, follow the instructions.
- **Keep the memory card out of reach of children to prevent swallowing.**
- **To disconnect the AC adapter from a wall socket, grasp and pull the plug. Do not unplug by pulling the cord.**

About this user manual

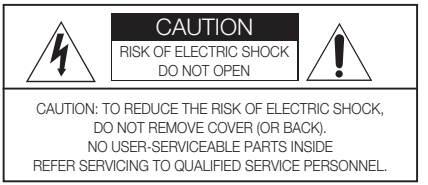
- Thank you for purchasing this Samsung Camcorder. Please read this user manual carefully before you use the camcorder and keep it handy for future reference. Should your camcorder fail to operate correctly, refer to Troubleshooting.
- The SMX-C24 has 16GB of built-in flash memory and can also use memory cards. The SMX-C20, SMX-C200 does not have built-in flash memory and uses memory cards exclusively.

  Although some features of SMX-C20, SMX-C24 and SMX-C200 are different, they operate in the same way.
- Illustrations of model SMX-C20 are used in this user manual.
- The displays in this user manual may not be exactly the same as those you see on the LCD screen.
- Designs and specifications of storage media and other accessories are subject to change without notice.
- Descriptions of the “built-in memory” in this user manual apply only to the following model: SMX-C24
- For Open Source License information, refer to the “OpenSourceInfo.pdf” in the provided CD-ROM.

Notes regarding trademarks

- All the trade names and registered trademarks mentioned in this manual or other documentation provided with your Samsung product are trademarks or registered trademarks of their respective holders.
- Windows® is registered trademark or trademark of Microsoft Corporation, registered in the United States and other countries.
- Macintosh is trademark of Apple Inc.
- YouTube® is a trademark of Google Inc.
- Flickr® is a trademark of Yahoo.
- Facebook® is a trademark of Facebook Inc.
- All the other product names mentioned herein may be the trademark or registered trademarks of their respective companies.
- Furthermore, “TM” and “®” are not mentioned in each case in this manual.

important safety instructions



This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

Warning

To Reduce The Risk Of Fire Or Electric Shock, Do Not Expose This Apparatus To Rain Or Moisture.

Caution

Do not expose this apparatus to dripping or splashing and place no objects filled with liquids, such as water bottles, on the apparatus.
To disconnect the camcorder's AC adapter from a wall socket, grasp and pull the plug. Do not unplug the adapter by pulling the wire.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachment/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

16. VENTILATION:
Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the CAMCORDER and to protect it from overheating. These openings must not be blocked or covered. Never place your CAMCORDER on a bed, sofa, rug, or other similar surface: on or near a radiator or heat register. This CAMCORDER should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

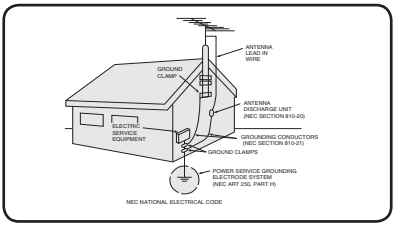
17. POWER SOURCES:
The CAMCORDER should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supply at your home, consult your appliance dealer or local power company. A CAMCORDER is intended to be operated from battery power, or other sources. Refer to the operating instructions.

18. GROUNDING OR POLARIZATION:
This CAMCORDER may be equipped with either a polarized 2-wire AC line plug (a plug having one blade wider than the other) or a 3-wire grounding type plug, a plug having a third (grounding) pin. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your outlet. Do not defeat the safety purpose of the polarized plug.

19. POWER-CORD PROTECTION:
Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords or plugs, convenient receptacles, and the point where they exit from the unit.

20. OUTDOOR ANTENNA GROUNDING:

CAMCORDER, be sure the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges, Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire and supporting structure, grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding to conductors, location of antenna-discharge unit, connection to grounding electrodes and requirements for the grounding electrode. See figure below.



21. LIGHTNING:
For added protection of this CAMCORDER during a lightning storm or when it is left unattended and unused for long periods of time, unplug it from the wall outlet.
This will prevent damage to the CAMCORDER due to lightningand powerline surges.

22. POWER LINES:
An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

important safety instructions

23. OVERLOADING:
Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

24. OBJECTS AND LIQUIDS:
Never push objects of any kind into this CAMCORDER through openings as they may touch dangerous voltage points or short out a part that could result in a fire or electric shock. Never spill liquids of any kind onto the CAMCORDER. Should spillage occur, unplug unit and have it checked by a technician before use.

25. SERVICING:
Do not attempt to service this CAMCORDER yourself. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

26. DAMAGE REQUIRING SERVICE:
Refer servicing to qualified service personnel under the following conditions:

- **a.** When the power-supply cord or plug is damaged.
- **b.** If any liquid has been spilled onto, or objects have fallen into the CAMCORDER.
- **c.** If the CAMCORDER has been exposed to rain or water.
- **d.** If the CAMCORDER does not operate normally when you follow the operating instructions,
  Note: Adjust only those controls that are covered in the user's manual. Improper adjustment of other controls may result in damage and it will often require extensive work by a qualified technician to restore the CAMCORDER to its normal operation.
- **e.** If the CAMCORDER has been dropped or the cabinet has been damaged.
- **f.** When the CAMCORDER exhibits a distinct change in performance, indicating a need for service.

27. REPLACEMENT PARTS:
When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer having the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

28. SAFETY CHECK:
Upon completion of any service or repairs to this CAMCORDER, ask the service technician to perform safety checks to determine that the CAMCORDER is in safe operating order.

29. To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or moisture.

30. When plugging the AC adapter into a 240V AC socket, be sure to use a suitable plug adapter.

USER INSTALLER CAUTION:
Your authority to operate this FCC certified equipment could be voided if you make changes or modifications not expressly approved by this party responsible for compliance to part 15 FCC rules.

NOTE:

(Hg) LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL, STATE OR FEDERAL LAWS. For details see lamprecycle.org, eiae.org, or call 1-800-Samsung (7267864)

CALIFORNIA USA ONLY
This Perchlorate warning applies only to primary CR (Manganese Dioxide) Lithium coin cells in the product sold or distributed ONLY in California USA " Perchlorate Material - special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate."

NOTE:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help and for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This Booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

FCC Warning
The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.
This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions;

(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

safety information

The safety precautions illustrated below are to prevent personal injury or material damage. Heed all instructions carefully.

WARNING
Death or risk of serious personal injury.

CAUTION
Means that there is a potential risk of personal injury or material damage.

Prohibited action.

Do not disassemble product.

Unplug from power supply.

Do not touch product.

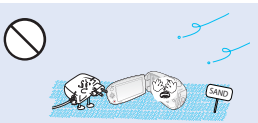
This precaution must be kept.

WARNING

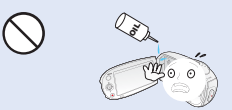
Do not overload outlets or extension cords as this may result in abnormal heat or fire.

Using the camcorder at temperatures over 140°F (60°C) may result in fire. Keeping the battery at a high temperature may cause an explosion.

Do not allow water, metal, or inflammable matter to enter the camcorder or AC power adaptor. Doing so may pose a fire hazard.



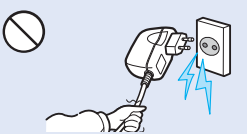
No sand or dust! Fine sand or dust entering the camcorder or AC power adaptor could cause malfunctions or defects.



No oil! Oil entering the camcorder or AC power adaptor could cause electric shock, malfunctions or defects.

Do not aim the LCD screen directly into the sun. Doing so could cause eye injuries, as well as lead to malfunctioning of internal parts of the product.

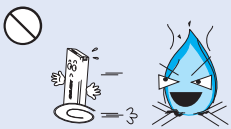
Do not bend the power-cord or damage the AC power adaptor by pressing on it with a heavy object. There may be a risk of fire or electric shock.



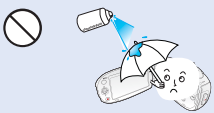
Do not disconnect the AC adaptor by pulling on its power-cord, as this could damage the power-cord.

Do not use the AC adaptor if it has damaged, split or broken cords or wires. Doing so may cause fire or electric shock.

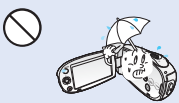
Do not connect the AC adaptor unless the plug can be fully inserted with no part of the blades exposed.



Do not dispose of battery pack in a fire as it may explode.

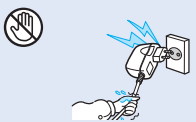


Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the camcorder.



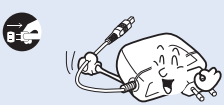
Keep the camcorder away from water when you use it near the beach or pool or when it rains. There is a risk of malfunction or electric shock.

Keep the used lithium battery or memory card out of the reach of children. If the lithium battery or memory card is swallowed by children, consult a physician immediately.



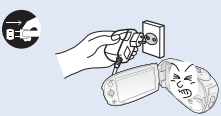
Do not plug or unplug the power cord with wet hands. There is a risk of electric shock.

Keep the power-cord unplugged when not in use or during lightning storms to prevent a fire hazard.

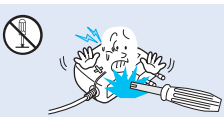


When cleaning the AC adaptor, unplug the power-cord to avoid a risk of a malfunction or electric shock.

If the camcorder makes an abnormal sound, or smells, or smokes, unplug the power-cord immediately and request service from a Samsung service center. There is a risk of fire or personal injury.



If the camcorder malfunctions, immediately detach the AC adaptor or battery from the camcorder to avoid fire or injury.

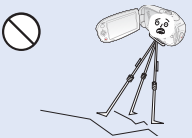


Do not attempt to disassemble, repair, or reform the camcorder or the AC adaptor to avoid a risk of fire or electric shock.

CAUTION

Do not press the surface of the LCD with force or hit it with a sharp object. If you push the LCD surface, display unevenness may occur.

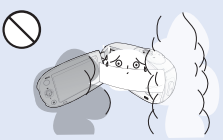
Do not drop or expose the camcorder, battery pack, AC adaptor, or other accessories to severe vibrations or impact. This may cause a malfunction or injury.



Do not use the camcorder on a tripod (not supplied) in a place where it is subject to severe vibrations or impact.

Do not use the camcorder near direct sunlight or heating equipment. This may cause a malfunction or injury.

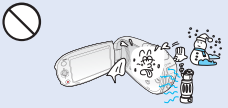
Do not leave the camcorder in a closed vehicle where the temperature is very high for a long time.



Do not expose the camcorder to soot or steam. Thick soot or steam could damage the camcorder case or cause a malfunction.

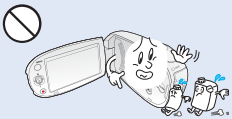
Do not use the camcorder near dense exhaust gas generated by gasoline or diesel engines, or corrosive gas such as hydrogen sulphide. Doing so may corrode the external or internal terminals, disabling normal operation.

Do not expose the camcorder to insecticide. Insecticide entering the camcorder could cause the product to operate abnormally. Turn the camcorder off and cover it with vinyl sheet, etc. before using insecticide.

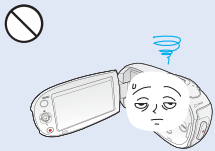


Do not expose the camcorder to sudden changes in temperature or humid places. There is also a risk of defect or electric shock when using outdoors during lightning storms.

Do not place the camcorder with the open LCD screen down.

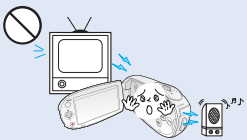


Do not wipe the camcorder body with benzene or thinner. The exterior coating could peel off or the case surface could deteriorate.

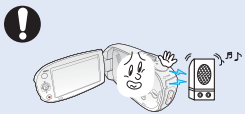


Do not leave the LCD monitor open when not using the camcorder.

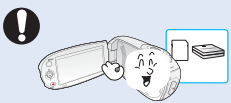
Do not hold the camcorder by the LCD monitor when lifting it. The LCD monitor could detach and the camcorder could fall.



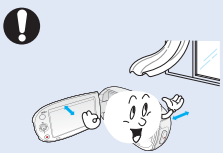
Do not use the camcorder near TV or radio. This could cause noise on the TV screen or to radio broadcasts.



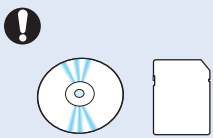
Do not use the camcorder near strong radio waves or magnetism such as speakers or large motors. Noise could enter video or audio that are being recorded.



Use Samsung-approved accessories only. Using products from other manufacturers may cause overheating, fire, explosion, electric shock or personal injuries due to abnormal operation.



Place the camcorder on a stable surface and a place with ventilation openings.



Keep important data separately. Samsung is not responsible for data loss.

Use the mains plug where it can be readily operable. If any problem occurs with the product, the mains plug must be removed to disconnect power completely. Turning off the power button on the product does not completely disconnect the power.

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quick start guide

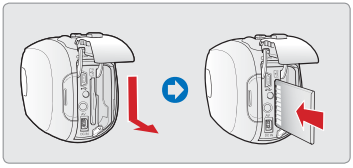
✪ This quick start guide introduces the basic operation and features of your camcorder.
See the reference pages for more information.

You can record videos in H.264 format!

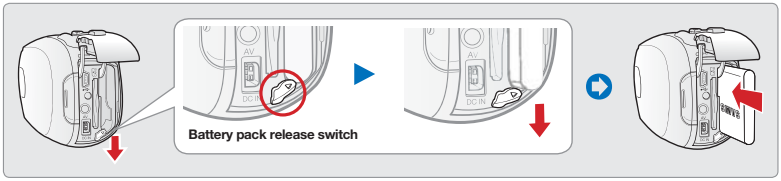
You can record videos in H.264 format, which enables you to conveniently email and share videos with your friends and family. You can also take photos with your camcorder.

STEP1: Get ready

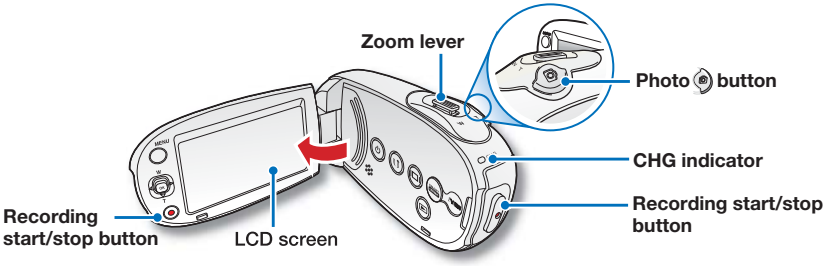
1. Insert a memory card. ➥page 31
   - You can use commercially available SDHC (SD High Capacity) or SD memory cards with this camcorder.
   - Set the appropriate storage media. (SMX-C24 only)



2. Insert the battery into the battery slot. ➥page 14
   - Gently slide the **Battery pack release** switch in the direction as shown in the figure.
3. Charge the battery fully. ➥page 15
   - The battery is fully charged when the CHG (charging) indicator light turns green.



STEP2: Record with your camcorder



Recording videos with H.264 format

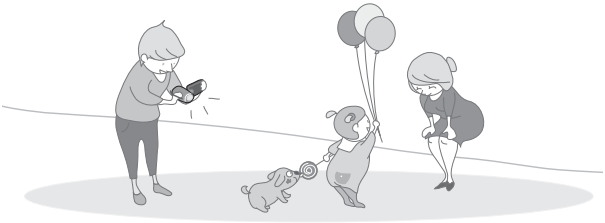
Your camcorder uses advanced H.264 compression technology to give you the clearest video quality. ➥page 46

1. Open the LCD screen.
2. Press the **Power** button.
3. Press the **Recording start/stop** button.
   - To stop recording, press the **Recording start/stop** button.

Recording photos

Captures a moving subject instantly and saves the scene as a photo image.

1. Open the LCD screen.
2. Press the **Power** button.
3. Press the **Photo** button fully when you are ready.



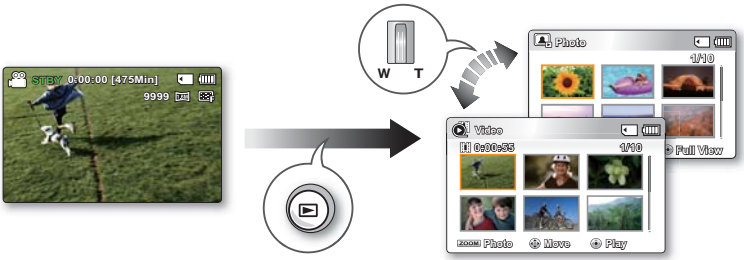
- Your camcorder is compatible with H.264 recording format. The H.264 format codes and records high quality video while using significantly less memory storage capacity.
- You can record videos in SD (standard definition). The default setting is **"TV Fine (720x480/60i)"**. ➥page 46
- You can not take photos while you are recording videos.

STEP3: Play back videos or photos

Viewing videos or photos on the LCD screen

You can find your desired recordings quickly by using the thumbnail index view.

1. Press the **Mode** button to select the Play mode.
   - The thumbnail index view appears. The thumbnail of the latest created or played file is highlighted.
2. Select the Video or Photo thumbnail index view screen.
   - You can switch between the video and photo thumbnail view using the zoom lever.
3. Use the **Control** button (▲/▼/◀ / ▶) to select a desired video or photo, and then press the **Control** button **(OK)**.



Viewing on a TV

You can enjoy detailed, brilliant quality videos on a connected TV. ➥page 95

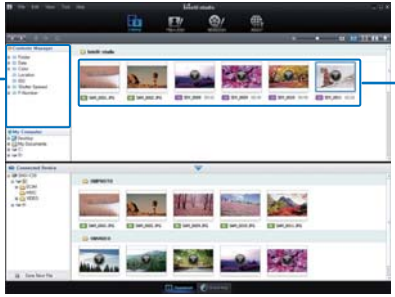
STEP4: Save recorded videos or photos

Simple and fun! Enjoy the various features of Intelli-studio on your Windows computer.

Using the Intelli-studio program built into your camcorder, you can import videos/photos into your computer, edit them, or share them with friends and family. For details, see page 84.

Viewing the videos/photos from your PC

1. Launch the Intelli-studio program by connecting the camcorder to your PC via the USB cable.
   - A new file saving screen appears with the Intelli-studio main window. Click **"Yes"**. The uploading procedure starts.
2. The new files are saved to your PC and registered to "**Contents Manager**" in the Intelli-studio program.
   - You can arrange the files by different options such as Face, Date, Location, etc.
3. You can double-click the file you would like to start playing.



Sharing videos/photos on YouTube/Flickr/Facebook

Share your contents with the world by uploading photos and videos directly to a web site with a single click. Click the **"Share** **"** → **"Upload"** tab on the browser. ➥page 89

The Intelli-studio runs automatically when you connect the camcorder to a Windows computer if you have specified **"PC Software: On"** in the Settings menu. ➥page 81

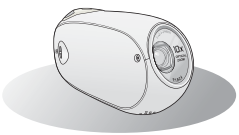
STEP5: Delete videos or photos

If the storage media is full, you cannot record new videos or photos. Delete videos or photos that you have saved to a computer from the camcorder's storage media. Then you can record new videos or photos on newly freed-up space.

Press the Mode button to select the Play mode → Press the MENU button → Control button (▲ /▼ / ◀ / ▶/OK) to select "Delete." ➥page 60

WHAT'S INCLUDED WITH YOUR CAMCORDER

Your new camcorder comes with the following accessories. If any of these items are missing from your box, call Samsung's Customer Care Center.



Model name	Color	Built-in memory	Memory card slot	LCD screen	Lens
SMX-C20BN/C200BN	Black	-	1 slot	color	10x (Optical), 1200x (Digital)
SMX-C20RN/C200RN	Red	-			
SMX-C20LN/C200LN	Blue	-			
SMX-C20UN/C200UN	Purple	-			
SMX-C24BN	Black	16GB			
SMX-C24RN	Red	16GB			
SMX-C24LN	Blue	16GB			
SMX-C24UN	Purple	16GB			

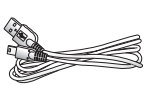
- Although some features of the models are different, they operate in the same way.

Checking your accessories

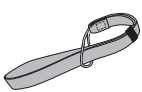
Battery pack
(IA-BH130LB)
AD43-00190A

AC power adaptor
(AA-MA9 type)
AD44-00151A

Audio/Video cable
AD39-00168A

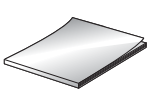


USB cable
AD39-00169A



Hand strap
AD63-04220A

User manual CD
AD46-00291A



Quick start guide
AD68-04491A

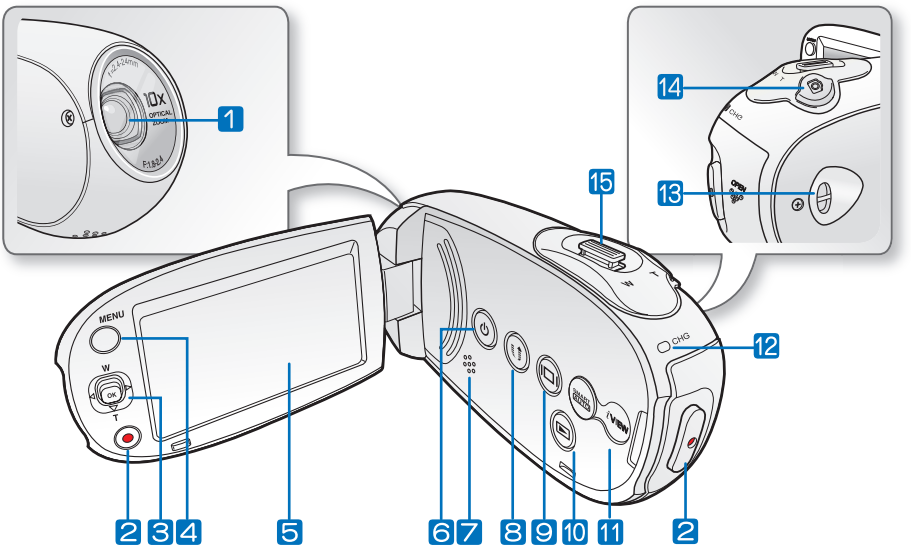
Optional accessories

Carrying case
AD69-00929A

Memory card
1109-001415

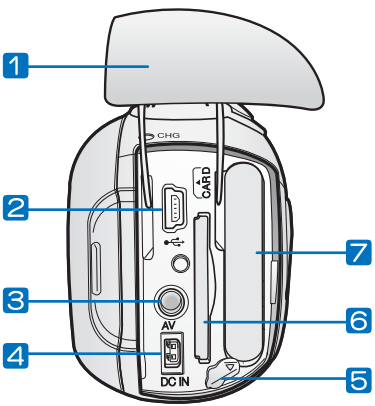
- The contents may vary depending on the sales region.
- Parts and accessories are available for purchase at your local Samsung dealer. SAMSUNG is not responsible for reduced battery life time or malfunctions caused by any unauthorized use of accessories.
- A memory card is not included. See page 32 for memory cards compatible with your camcorder.
- Your camcorder includes a user manual CD and a printed quick start guide.
- (Optional accessories) : This is an optional accessory. To buy one, contact your nearest Samsung dealer.

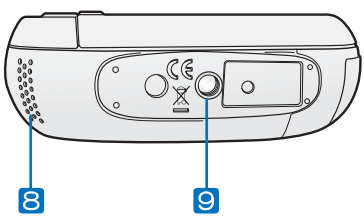
FRONT & LEFT VIEW



1	Lens
2	Recording start/stop button
3	Control button (▲/▼/◀/▶/OK), Zoom (W/T) button
4	MENU button
5	LCD screen
6	Power button
7	Built-in speaker
8	Share button
9	Display button
10	Mode button
11	SMART AUTO / ¡VIEW button
12	Charging indicator (CHG)
13	Hand strap hook
14	Photo button
15	Zoom lever (W/T)

REAR & BOTTOM VIEW





1	Jack/ Battery pack/ Memory card cover
2	USB jack ( )
3	AV jack (AV)
4	DC IN jack (DC IN)
5	Battery pack release switch

6	Memory card slot
7	Battery pack slot
8	Internal microphone
9	Tripod receptacle

Usable Memory Cards (512MB~32GB)

SD/SDHC

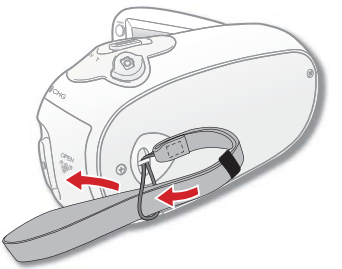
Be careful not to cover the internal microphone and lens during recording.

preparation

This section provides information that you should know before using this camcorder such as how to use the provided accessories, how to charge the battery, and how to setup the operation mode and initialize setup.

USING THE HAND STRAP

Attach the strap as illustrated below. When you shoot, place your hand through the loop to prevent the camcorder from being dropped and damaged.

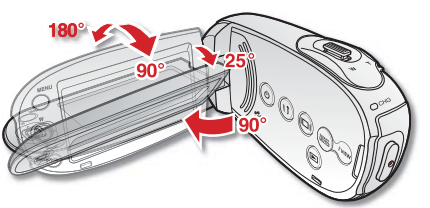


ADJUSTING THE LCD SCREEN

The wide LCD screen on your camcorder offers high quality image viewing.

1. Open the LCD screen with your finger.
- The screen opens up to 90°.

2. Rotate the LCD screen.
- When you open the LCD, you can rotate it back 25° (to the first click) so that it is parallel with the lens.
- You can also rotate it up to 180° towards the lens and up to 90° backward.
  To view recordings more conveniently, rotate the screen by 180° towards the lens, then fold it back to the body.



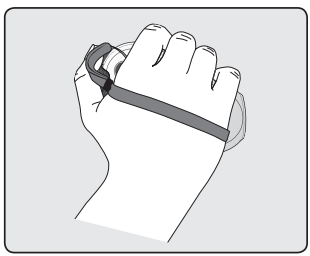
Excessive rotation may damage the connective hinge between the screen and the camcorder.

- Remove fingerprints or dust on the screen with a soft cloth.
- When the LCD screen is rotated by 180° toward the lens, the left and the right sides of the subject are shown in reverse as if you were looking at a mirror. This is not a problem and does not affect the image being recorded.

BASIC CAMCORDER POSITIONING

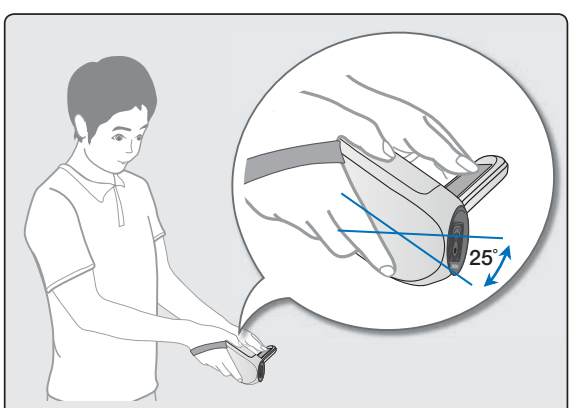
Use both hands while taking a video or picture to prevent the camcorder from shaking.
Try to avoid any slight movement while shooting.

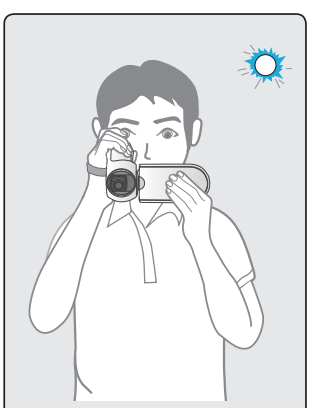
Adjusting the shooting angle



Aim the camcorder as shown in the illustration.

1. Hold the camcorder with both of your hands.
2. Put one hand through the hand strap loop.
3. Make sure your footing is stable and there is no danger of colliding with another person or object.
4. Angle the camcorder down at a 25˚ degree angle. See note below.





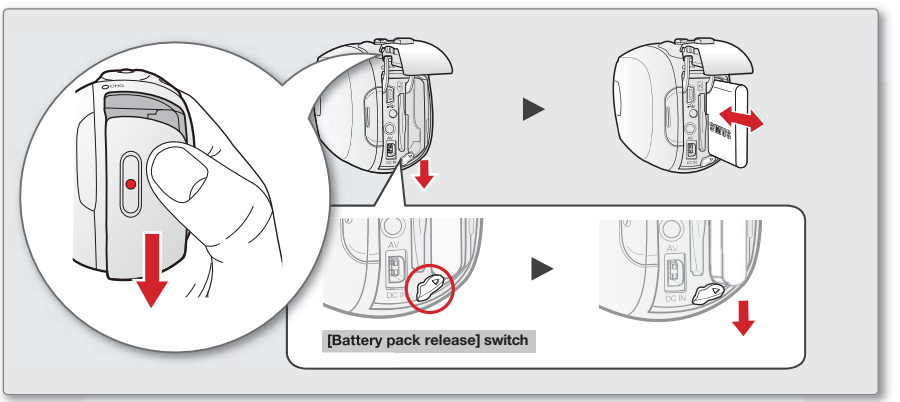
- This camcorder lens shooting angle is approx. 25˚ higher than the rest of the camcorder body. Make sure the camcorder lens is angled for proper shooting.
- We recommend you keep the sun behind you while shooting.

CONNECTING A POWER SOURCE

- Be sure to charge the battery pack before you start using your camcorder.
- Use the **IA-BH130LB** battery pack only.
- The battery pack may be charged a little at the time of purchase.

Battery pack insertion/ejection

We recommend you purchase one or more additional battery packs to allow continuous use of your camcorder.



Inserting the battery pack

1. Slide the battery slot cover down, and then let it open up as shown in the figure above.
2. Insert the battery pack into the battery slot until it locks.
   - Make sure that the SAMSUNG logo is facing the LCD display side of the camcorder as shown in the figure.
3. Push the battery cover down until it meets the camcorder body, then slide it up to close.

Ejecting the battery pack

1. Slide down, and then open the battery slot cover. Then, push the **Battery pack release** switch.
   - Gently push the battery pack release switch in the direction shown in the figure above to eject the battery.
2. Pull the ejected battery out in the direction shown in the figure.
3. Push the battery cover down until it meets the camcorder body, then slide it up to close.

- Remove the battery pack from the camcorder while not in use.
- We recommend you charge an additional battery pack in preparation for prolonged outdoor use.
- Additional battery packs can be purchased from samsungparts.com.

Charging the battery

You can charge the battery using the AC power adaptor or USB cable.

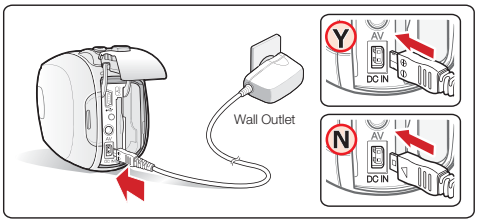
PRECHECK!

- Be sure to charge the battery before you start using your camcorder.
- Use the battery pack and the AC power adapter provided with the camcorder.

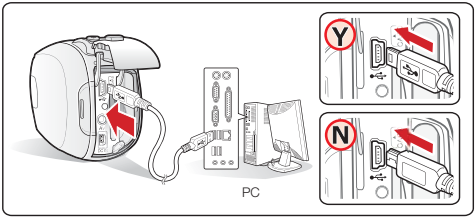
1. Insert the battery into the camcorder. ➥page 14
2. Make sure the camcorder is off.
3. Open the back cover of the unit.
4. Charge the battery using the **AC power adaptor or USB cable**.
   - The CHG (charge) lamp lights up and charging starts. When the battery is fully charged, the charging (CHG) lamp turns green. ➥page 16
   - Make sure you plug the adaptor cable or USB cable into the camcorder in the proper direction. See the figures to the right.

Using the AC power adaptor	Connect the AC power adaptor to the camcorder properly and plug the AC power adaptor in the wall outlet.
Using the USB cable	Connect the USB cable to the camcorder properly and connect the other end to a USB port of a PC.

Connecting the AC power adaptor



Connecting the USB cable

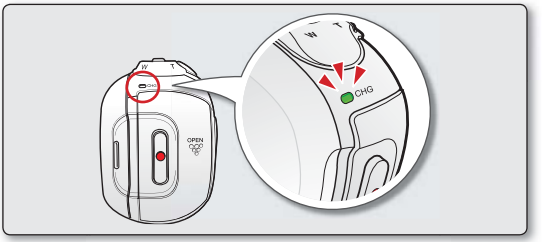


- Charging the battery pack at temperatures below 50°F (10°C) may take longer or prevent the battery pack from charging fully (The green indicator will not turn on).
- Please make sure that there are no foreign substances in the plug and socket when you connect the AC power supply to the camcorder.
- Fully charge the battery pack before use.
- When using the AC power supply, place it close to the wall outlet. If you experience a malfunction while using the camcorder, unplug the AC power supply immediately from the wall outlet.
- Do not use the AC power supply in a confined space, such as between furnishings.

- When recording indoors with an available wall outlet, you can use the AC power supply instead of the battery pack to power the camcorder.
- When charging, if both the USB cable and AC power adaptor are connected, the AC power adaptor will override the USB.
- If the camcorder is turned on, the battery will still charge, but more charging time will be needed. We recommend you you to keep the camcorder turned off while charging.

CHECKING THE BATTERY STATE

You can check the charging state and remaining battery capacity.



Charging (CHG) lamp

The color of the charging indicator shows the charging state.

Charging state	Charge		
	Charging	Fully Charged	Error
LED Color	(Orange)	(Green)	(Orange Blink)

Battery Level Display

The Battery Level Display shows the amount of battery power remaining in the battery pack.

Battery level indicator	State	Message
	Fully charged	-
	25%~50% used	-
	50%~75% used	-
	75%~95% used	-
	95%~99% used	-
	Exhausted (flickers): The device will be forced to turn off after 3 minutes. Change the battery pack as soon as possible.	-
-	(flickers): The device will be forced to turn off after 3 seconds.	**"Low battery"**

- When battery charge errors occur continuously, contact a SAMSUNG authorized service center or Samsung Customer Care.
- Before using the camcorder, charge the battery.
- Above figures are based on a fully charged battery pack at normal temperature. Low ambient temperature may affect the use time.

Charging, recording, and playback times with fully charged battery pack (with no zoom operation, etc.)

For your reference, the approximate charging and recording times for a fully charged battery pack:

Battery type		IA-BH130LB				
Charging time		Using an AC power adaptor			approx. 2 hr.	
		Using a USB cable			approx. 4 hr.	
Video resolution		720 x 480 (60i)			640 x 480 (30p)	
		TV Super Fine ( )	TV Fine ( )	TV Normal ( )	Web Fine ( )	Web Normal ( )
Mode	Continuous recording time	approx. 160min.				
	Playback time	approx. 180min.				

- The times are only for reference. Figures shown above are measured under Samsung's test environment and may differ according to user and conditions.
- We recommend using the AC power adaptor when using the Time Lapse REC Function.

Continuous Recording (without zoom)

The continuous recording time of the camcorder in the table shows the available recording time when the camcorder is in the recording mode without using any other function after recording starts. When actually recording, the battery pack may discharge 2-3 times faster than this reference, since the record start/stop and zoom functions are being operated, and playback is performed. Prepare additional charged battery pack(s) to allow for the time you are planning to record on the camcorder. Note that the battery pack discharges faster in a cold environment.

The charging time will vary depending on the remaining battery level.

About the battery pack

- The benefits of the battery pack: the battery pack is small but has a large power capacity. It should be recharged at temperatures between 50°F ~ 86°F (10°C ~ 30°C). However, when it is exposed to cold temperatures (below 32°F (0°C)), its usage time is reduced and it may cease to function. If this happens, place the battery pack in your pocket or any other warm, protected place for a short time, then reattach it to the camcorder.
- Do not put the battery pack near any heat source (i.e. fire or a heater).
- Do not disassemble, apply pressure to, or heat the battery pack.
- Do not allow battery pack terminals to be short-circuited. It may cause leakage, generate heat, or cause a fire.

Maintaining the battery pack

- The recording time is affected by temperature and environmental conditions.
- We recommend using only the battery pack type that came with your camcorder. This battery pack type is available from your Samsung retailer. When the battery reaches the end of its life, please contact your local dealer. The batteries must be dealt with as chemical waste.
- Make sure that the battery pack is fully charged before starting to record.
- To preserve battery power, keep your camcorder turned off when you are not operating it.
- Even when the power is switched off, the battery pack will still discharge if it is left in the camcorder. If you do not use the camcorder for an extended time period, up to 6 months, deplete the battery pack fully, remove it from the camcorder, and then store it in a cool place.
- To save battery power, you can set the **"Auto Power Off"** function, which turns off the camcorder if there is no operation for 5 minutes. To disable this option, change the setting of **"Auto Power Off"** to **"Off"**. ➥page 81
- When not using the camcorder for more than 6 months, we recommended you fully charge the battery pack once every 6 months, attach it to the camcorder and use it until it is fully depleted. Then, remove the battery pack and store it in a cool place.

About the battery life

- Battery capacity decreases over time and through repeated use. If decreased usage time between charges becomes significant, it is probably time to replace the battery.
- Each battery's life is governed by storage, operating, and environmental conditions.

Using an AC power source

We recommend that you use the AC power adaptor to power the camcorder from a household AC outlet when you change settings, play back, or use the camcorder indoors. To power the camcorder, make the same connections you do when charging the battery pack. ➥page 15

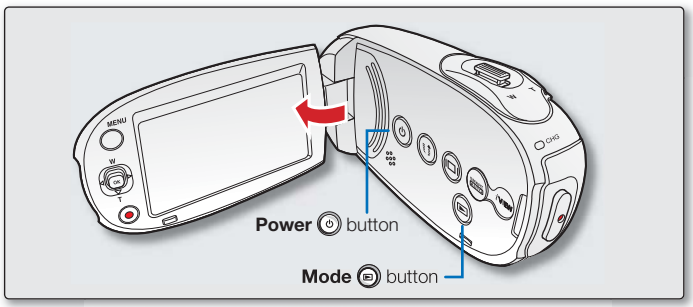
Use only Samsung approved battery packs.
Do not use batteries from other manufacturers because there is a danger of overheating, fire, or explosion. Samsung is not responsible for problems occurring due to using unapproved batteries.

- Before detaching the power source, make sure that the camcorder's power is turned off. Failure to do so can result in camcorder malfunction.
- Use a nearby wall outlet when using the AC power adaptor. Disconnect the AC power adaptor from the wall outlet immediately if any malfunction occurs while using your camcorder.
- Do not use the AC power adaptor in a narrow space, such as between a wall and furniture.

- Be sure to use the specified AC power adaptor to power the camcorder. Using other AC power adaptors could cause electric shock or result in fire.
- The AC power adaptor can be used around the world. An AC plug adaptor is required in some foreign countries. If you need one, purchase it from your distributor.

BASIC OPERATION OF YOUR CAMCORDER

This section explains the basic techniques of recording videos or photos and also the basic settings on your camcorder. Set the appropriate operation mode according to your preference using **Power** and **Mode** buttons.



Turning the camcorder on or off

You can turn the power on or off by pressing the **Power** button.

1. Open the LCD screen, and then press the **Power** button to turn on the camcorder.
2. To turn off the camcorder, press the **Power** button.

Setting the operating modes

You can switch the operating mode in the following order each time you press the **Mode** button: **Record mode** ↔ **Play mode**

Mode	Functions
Record mode	To record videos or photos.
Play mode	To play videos or photos, or edit them.

When using this camcorder for the first time

When you use your camcorder for the first time or reset it, the time zone screen appears as part of the startup display. Select your geographical location and set the date and time. ➥page 28

If you do not set the date and time, the time zone screen appears every time you turn on the camcorder.

- This camcorder provides one record mode for both video and photo recordings. You can easily record videos or photos in the same mode without having to switch modes.
- One play mode is also provided for video and photo recordings.
- When the camcorder is turned on, the self-diagnosis function operates and a message may appear. In this case, refer to "Warning indicators and messages" (on pages 100-102) and take corrective action.

SWITCHING TO THE POWER SAVING MODE

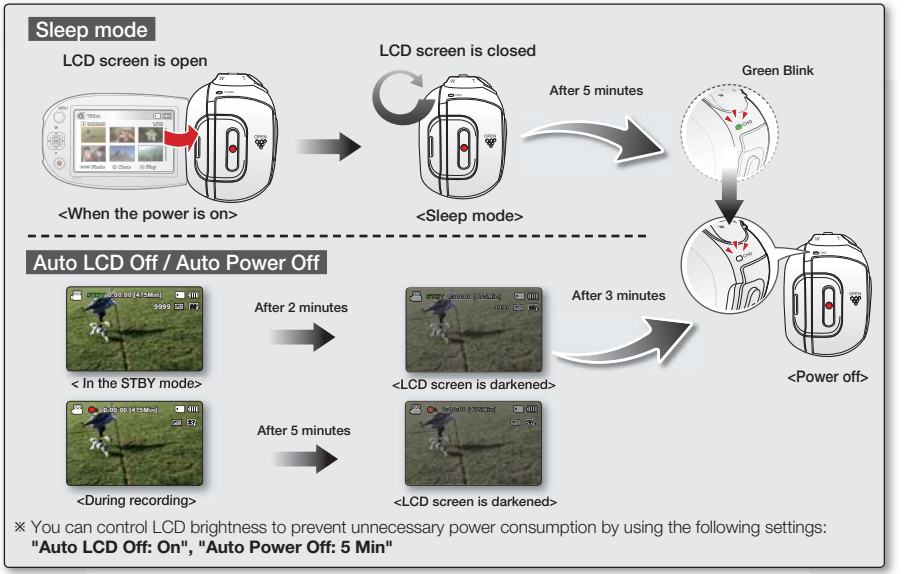
If you need to use camcorder for the extended time, the following functions prevent unnecessary energy consumption.

In STBY mode:

- The camcorder switches to sleep mode when the LCD screen is closed.

In Playback mode (Includes the thumbnail view mode):

- The camcorder switches to the sleep mode when the LCD screen is closed, and then if idle for more than 5 minutes the camcorder turns off. However, if **"Auto Power Off: 5 Min"** is set, the camcorder turns off after 5 minutes. ➥page 81
- If you open the LCD screen or connect a cable to the camcorder during sleep mode, the sleep mode ends and the camcorder returns to the last used operation mode.

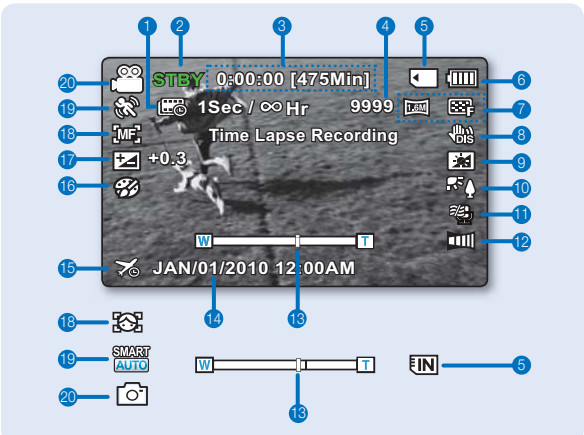


※ You can control LCD brightness to prevent unnecessary power consumption by using the following settings: **"Auto LCD Off: On", "Auto Power Off: 5 Min"**

- **The power saving mode does not work in the following situations:**
  - When the camcorder has a DC power cable connection. (AC power adaptor, USB cable)
  - While recording, playing back, or showing a slideshow.
  - When the LCD screen is opened.
- The camcorder consumes less battery power in the power saving mode (about 50% less than in the standby mode). However, if you intend to use the camcorder for the maximum length of time before recharging, we recommend you turn off the camcorder by pressing the **Power** button when not using it.

LCD SCREEN INDICATORS

Video and Photo record mode

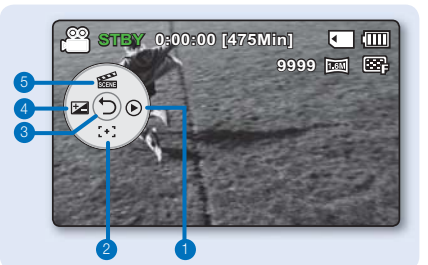


1 Time Lapse REC *
2 Operating mode (STBY (Standby) / ● (Recording))
3 Time counter (video recording time / remaining recordable time)
4 Photo image counter (total number of recordable photos)
5 Storage media (Memory card or built-in memory (SMX-C24 only))
6 Battery info. (Remaining battery level)
7 Photo Resolution / Video Resolution
8 Anti-Shake (HDIS)
9 LCD Enhancer *
10 Back Light
11 Wind Cut
12 Fader *
13 Zoom (Optical zoom / Digital zoom)
14 Date/Time Display
15 Time Zone (Visit)
16 Digital Effect
17 EV (Exposure value)*
18 Manual Focus * / Face Detection *
19 iSCENE / Smart Auto
20 Record mode

- The screen above is an example for explanation only. It may differ from your actual display.
- The on-screen indicators are based on a 16GB SDHC memory card.
- Functions marked with a * do not retain their settings when the camcorder is turned off.
- For enhanced performance, the display indications and their order are subject to change without prior notice.
- **This camcorder provides one combined video and photo record mode. You can easily record videos or photos in the same mode without having to change it.**
- The total number of recordable photos is counted based on available space on the storage media.

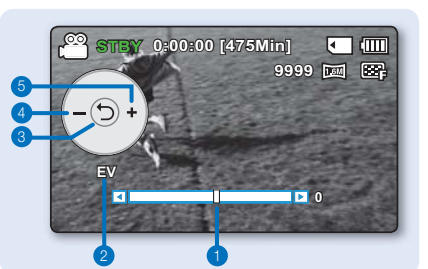
LCD SCREEN INDICATORS

Video and Photo record mode: Shortcut menu (OK Guide)



1 Quick View
2 Focus* (Auto Focus/Face Detection/Manual Focus)
3 Shortcut menu (OK Guide) / Return
4 EV (Exposure value)*
5 iSCENE

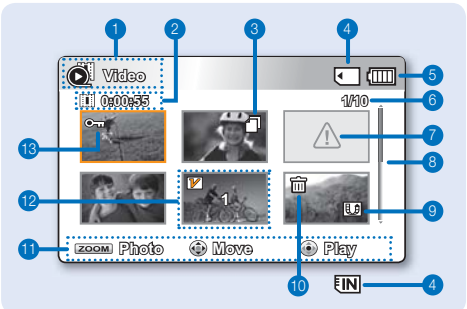
Video and Photo record mode: Shortcut menu (Manual)



1 Manual Control Bar/ Value
2 Menu name
3 Shortcut menu (OK Guide) / Return
4 Value adjust (down)
5 Value adjust (up)

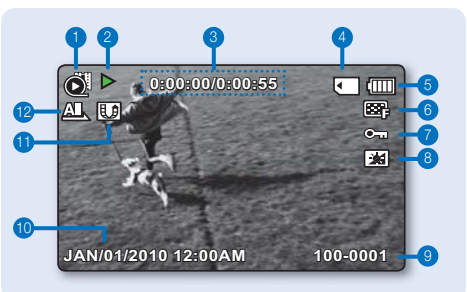
- The illustration above shows the EV (Exposure value) screen.
- Functions marked with a * do not retain their settings when the camcorder is turned off.
- The shortcut menu (OK guide) represents the most frequently accessed functions according to the selected mode. Pressing the **OK** button will display a shortcut menu of frequently used functions on the LCD screen.

Video Play mode : Thumbnail View



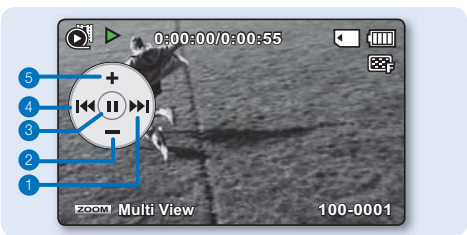
1 Video Play mode
2 Recorded time
3 Copy Selected (SMX-C24 only)
4 Storage media (Memory card or built-in memory (SMX-C24 only))
5 Battery info (Remaining battery level)
6 Now/ Total file number
7 Error File
8 Scroll bar
9 Share mark
10 Delete Selected
11 Button Guide
12 Edit (Combine)
13 Protection

Video Play mode : Single View



1 Video Play mode
2 Play Status (Play (▶) / Pause (❚❚)/ Search playback (◀◀x2 / ▶▶x2) / Frame-by-frame playback (◀❚❚/❚❚▶) / Slow motion playback (◀❚❚/❚❚▶))
3 Time code (Elapsed time / Recorded time)
4 Storage media (Memory card or built-in memory (SMX-C24 only))
5 Battery info (Remaining battery level)
6 Video Resolution
7 Protection
8 LCD Enhancer
9 File Name (File number)
10 Date/Time Display
11 Share mark
12 Play Option

Video Play mode : Shortcut menu (OK Guide)



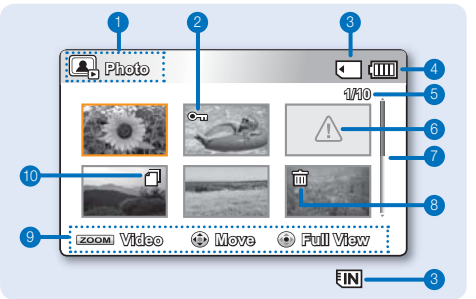
1 Move to next file / Forward playback (Next skip playback/Forward playback search/Forward slow playback/ Frame-by-frame playback) ➥page 27
2 Volume Down
3 Play (▶) / Pause (❚❚)
4 Move to previous file / Reverse playback (Previous Skip Playback/Reverse Playback Search/Reverse slow playback/ Frame-by-frame playback) ➥page 27
5 Volume Up

LCD SCREEN INDICATORS

Video Play mode : Single View (Volume)

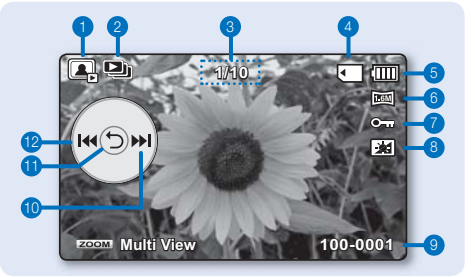
1 Date/Time
2 Volume Bar

Photo Play mode: Thumbnail View



1 Photo Play mode
2 Protection
3 Storage media (Memory card or built-in memory (SMX-C24 only))
4 Battery info (Remaining battery level)
5 Now/ Total file number
6 Error File
7 Scroll bar
8 Delete Selected
9 Button Guide
10 Copy Selected (SMX-C24 only)

Photo Play mode : Single View



1 Photo Play mode
2 Slide Show
3 Image counter (current image / total number of recorded images)
4 Storage media (Memory card or built-in memory (SMX-C24 only))
5 Battery info (Remaining battery level)
6 Photo resolution
7 Protection
8 LCD Enhancer
9 File Name (file number)
10 OK Guide (Next image)
11 Shortcut menu (OK Guide) / Return
12 OK Guide (Previous image)

TURNING THE SCREEN INDICATORS ON/OFF

You can switch the on-screen information display mode.

Switching the information display mode :

- Press the **Display** button while the camcorder is on.
  The full and minimum display modes alternate.

Full display mode: All relevant information appears.
Minimum display mode: Only operating status indicators appear.

<Full display mode>

<Minimum display mode>

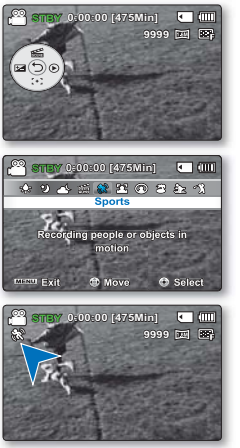
- If the camcorder has warning information, a warning message will appear.
- In the menu screen, the **Display** button will be deactivated.

SHORTCUT MENU (OK GUIDE)

The Shortcut menu (OK guide) contains the most frequently accessed functions according to the selected mode.

✪ **For example: Setting iSCENE in the Record mode using the Shortcut menu (OK guide).**

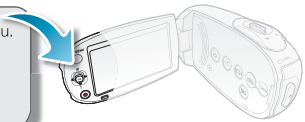
1. Press the **OK** button in STBY mode.
   - Shortcut menu (OK guide) is displayed.
2. Press the **Control** button (▲) to select **"iSCENE"** mode.
   - The iSCENE mode menu appears, where you can press the **Control** button (◀ / ▶) to select the desired submenu item.
3. Press the **OK** button to confirm your selection.
   - Press the **OK** button to exit the shortcut menu.
   - The selected submenu item indicator ( ) displays on the screen.



- The shortcut menu (OK guide) cannot be used in the Smart Auto mode.
- Before selecting a menu item, please make sure that you've set the appropriate mode first.

Shortcut function using the Control buttons

1. Press the **Control** button (▲/▼/◀ / ▶) to select the desired menu. You can easily operate the menu by using the **Control** button.
2. The **Control** button operates various functions depending on the selected mode.
3. You can access the Shortcut menu directly using the **OK** button.



Button	Record (/) mode	Play mode		Menu selection
		Video Play ( ) mode	Photo Play ( ) mode	
OK	- Access the shortcut menu - Confirm selection - Exit the shortcut menu	- Shortcut menu (OK guide) is displayed - Playback / Pause	Single image playback	Confirms selection
UP	iSCENE Zoom (wide)	Increase the volume	Increase the volume (During the Music Slide Show)	Moves the cursor up
DOWN	Focus Zoom (tele)	Decrease the volume	Decrease the volume (During the Music Slide Show)	Moves the cursor down
LEFT	EV	- Search playback RPS (Reverse Playback Search) rate: x2→x4→x8→x16 - Previous Skip Playback - Frame-by-frame playback - Slow motion playback (Reverse slow playback) Rate: x1/2→x1/4→x1/8→x1/16	Previous image	Moves to the previous menu
RIGHT	Quick View	- Search playback FPS (Forward Playback Search) rate: x2→x4→x8→x16 - Next Skip Playback - Frame-by-frame playback - Slow motion playback (Forward slow playback) Rate: x1/2→x1/4→x1/8→x1/16	Next image	Moves to the next menu

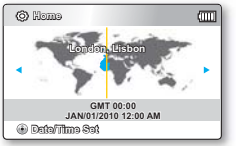
INITIAL SETTING : TIME ZONE, DATE AND TIME, AND OSD LANGUAGE

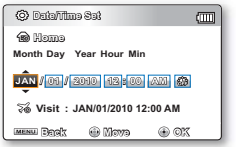
- Initial setting is available in all operating modes.
- To read the menus or messages in your desired language, set the OSD language.
- To store the date and time during recording, set the time zone and date/time.

Turning the power on and setting the date and time

Set the date and time when using the camcorder for the first time. If you do not set the date and time, the date and time (time zone) screen appears every time you turn on your camcorder.

1. Open the LCD Screen and press the **Power** button to turn on the camcorder.
   - When you turn on your camcorder for the first time, the Time Zone screen appears set to London, Lisbon. (Greenwich Mean Time)
   - You can also set the **"Time Zone : Home"** in the **"Settings"** menu. ➥page 74
2. Select your geographical area with **Control** button (◀ / ▶), then press the **OK** button.
   - The **"Date/Time Set"** screen appears.
3. Select the date and time information, and change the setting values by using the **Control** button (▲/▼/◀ / ▶).
4. Make sure the clock is correctly set, and then press the **OK** button.





Tip

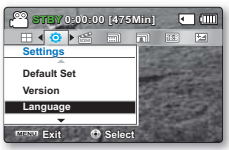
Turning the date and time display on/off
To switch the date and time display on or off, access the menu and change the Date/Time Display mode. ➥page 76

Setting the clock to local time when traveling or abroad
You can easily set the clock to the local time by setting a time difference when using your camcorder abroad. Select **"Time Zone"** on the menu, then set the time difference. ➥page 74

- The year can be set up to 2037 using the **"Home"** menu.
- According to the Daylight Savings time setting, the year may be displayed "2009" or "2038."
- Activating the icon ( ) moves the time forwards 1 hour.
- **Rechargeable built-in battery**
  - The rechargeable battery is built in the camcorder to maintain the basic settings (date, time, etc.) even if the camcorder is turned off.
  - The settings are initialized if the battery is run out or discharged. In this case, set the date and time again after charging the battery pack.
  - Battery capacity decreases over time and through repeated use. If the battery is dead and not recharged, contact a SAMSUNG authorized service center.

Selecting the OSD language

You can select the language the camcorder will use in the menu screen and the messages. The language setting is retained whenthe camcorder is powered off.



1. Press the **MENU** button.
   - The menu screen appears.
2. Press the **Control** button (◀ / ▶) to select **"Settings."**
   - The menus in **"Settings"** mode will appear.
3. Press the **Control** button (▲ / ▼) to select **"Language"**, and then press the **OK** button.
4. Press the **Control** button (▲ / ▼) to select the desired OSD language, and then press the **OK** button.
5. Press the **MENU** button to exit the menu.
   - The OSD language is is changed to the language you selected.

Submenu items

English /한국어/ Français / Deutsch / Italiano / Español / Português / Nederlands / Svenska / Suomi / Norsk / Dansk / Polski / Čeština / Slovensky / Magyar / Română / Български / Ελληνικά / српски / Hrvatski / Українська / Русский / 中文 /日本語 / ไทย / Türkçe / ايرانى / العربية / עברית

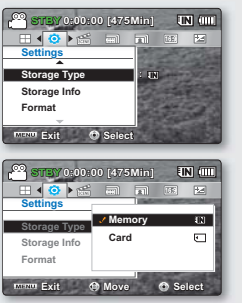
- Even if the battery pack or AC power are removed, the language setting will be preserved.
- The **"Language"** options may be changed without prior notice.
- The date and time format may change depending on the language you selected.

SELECTING THE STORAGE MEDIA (SMX-C24 ONLY)

- You can record on the built-in memory or a memory card, so the desired storage media needs to be selected before starting recording or playback.
- You can use SDHC and SD cards in your camcorder. (Some cards are not compatible depending on the memory card manufacturer and memory card type.)
- Before inserting or ejecting the memory card, turn the camcorder off.

Selecting the storage media

1. Press the **MENU** button.
   - The menu list appears.
2. Press the **Control** button (◀ / ▶) to select **"Settings."**
3. Press the **Control** button (▲ / ▼) to select **"Storage Type"**, and then press the **OK** button.
4. Press the **Control** button (▲ / ▼) to select **"Memory"** or **"Card"**, and then press the **OK** button.
   - **"Memory"**: When using the built-in memory.
   - **"Card"**: When using a memory card.
5. Press the **MENU** button to exit.



Using the built-in memory (SMX-C24 only)

- This camcorder has an embedded 16GB (SMX-C24 only) memory.

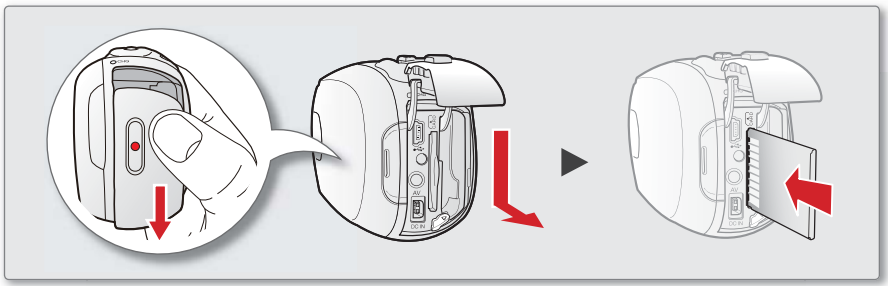
Using a memory card (not supplied)

- This camcorder has a card slot for SD and SDHC (Secure Digital High Capacity) memory cards.
- You can use SDHC and SD cards in your camcorder.
  - Some cards are not compatible depending on a memory card manufacturer and memory card type.

Never format the built-in memory or memory card using a PC.

- If you insert a memory card when the camcorder is on, a pop-up message will prompt you to select the storage type automatically. (SMX-C24 only)
- If there is no memory card inserted, only the built-in memory will be available. (SMX-C24 only)

INSERTING / EJECTING THE MEMORY CARD



Inserting a memory card

1. Turn the camcorder off.
2. Slide and open the battery/memory card cover as shown in the figure.
3. Insert the memory card into the memory card slot in the direction of the arrow in the figure until it softly clicks.
4. Close the cover.

Ejecting a memory card

1. Turn the camcorder off.
2. Slide and open the battery/memory card cover as shown in the figure.
3. Slightly push the memory card inwards to pop it out.
4. Pull the memory card out of the memory card slot and close the cover.

- As shown in the figure, be sure to insert the memory card with the label facing right.
- Do not format the memory card on a PC.
- Do not eject a memory card during operations such as recording, playback, formatting, deleting, and editing. Doing so may damage the memory card or cause loss of data.
- Be careful not to push the memory card too hard. The memory card may suddenly pop out.
- If this is a new memory card, a card formatted by another device, or a card containing data stored by another device, format the card. ➥page 73
- Formatting erases all data on the memory card.

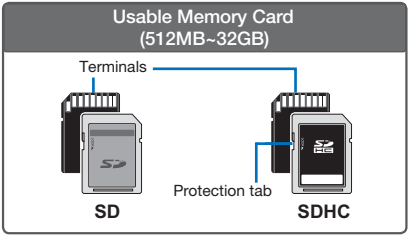
Your camcorder supports only SD (Secure Digital) and SDHC (Secure Digital High Capacity) cards. Card compatibility with the camcorder may vary depending on the manufacturer and type of memory card.

SELECTING A SUITABLE MEMORY CARD

A memory card is a compact portable storage media.

Compatible memory cards

- This camcorder can use SD (Secure Digital) and SDHC (Secure Digital High Capacity) cards. It is recommended to use an SDHC (Secure Digital High Capacity) card. SD cards up to 2GB are supported with this camcorder. Normal operation is not guaranteed with SD cards bigger than 2GB.
- Compatible memory card capacity:
  SD: 512MB~2GB, SDHC: 4~32GB
- Compatible recording media:
  We recommend the following recording media for use with this camcorder. We do not recommend others, so buy such products with caution.
  SDHC/SD memory cards made by:
  By **Panasonic, SanDisk, and Toshiba**.
- If you use other media, the media may fail to record data correctly, or may lose data that has already been recorded. For video recording, use a memory card that supports a faster write speed (at least 2MB/sec).
- SD/SDHC memory cards have a mechanical write-protection switch. Setting the switch prevents accidental erasure of files recorded on the card. To enable writing, move the switch up in the direction of the terminals. To set write protection, move the switch down.



SDHC (Secure Digital High Capacity) Memory Card

- The SDHC card is a higher version (Ver. 2.00) of SD card and supports capacities above 2GB.
- Due to a changed File Allocation System and physical specifications, the SDHC memory card cannot be used with current SD enabled host devices. The SDHC memory card can only be used with SDHC enabled host devices which carry a SDHC logo on their exteriors or in their operation manuals.

Common cautions for memory card

- Damaged data may not be recovered. We recommend you make a backup of important data on the hard disk of your PC.
- Turning the power off or removing a memory card during operations such as formatting, deleting, recording, and playback may cause data loss.
- If you modify the name of a file or folder stored in the memory card using your PC, your camcorder may not recognize the modified file.

Handling a memory card

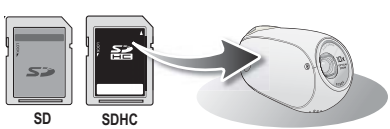
- We recommend you turn off the camcorder before inserting or removing a memory card to avoid data loss.
- There is no guarantee that you can use a memory card formatted by other devices. Be sure to format your memory card using this camcorder.
- You must format newly-purchased memory cards, memory cards with data that your camcorder cannot recognize or with data saved by other devices. Note that formatting erases all data on the memory card.
  ➥page 73
- If you cannot use a memory card that has been used by another device, format it with your camcorder. Note that formatting erases all information on the memory card.
- A memory card has a certain life span. If you cannot record new data, you have to purchase a new memory card.
- A memory card is a precision electronic media. Do not bend, drop, or cause strong impact to the card.
- Do not use or store at high temperatures, in humid conditions, or a dusty environment.
- Do not put foreign substances on the memory card terminals. Use a soft dry cloth to clean the terminals if required.
- Do not paste anything on the card except a label on the label pasting portion.
- Be careful to keep the memory card out of the reach of children, who might swallow it.

The camcorder supports SD/SDHC memory cards for data storage.

- The data storage speed may differ, depending on the manufacturer and production system.
- Users using a lower write speed memory card for recording a video may have difficulties storing the video on the memory card. You can even lose your video data during the recording.
- In an attempt to preserve every bit of the recorded video, the camcorder forcibly stores the video on the memory card and displays a warning: **"Low speed card. Please record at a lower resolution."**

To facilitate video recording, you are recommended to use a memory card that supports faster write speeds.

- If you are forced to use a low speed memory card, resolution of the recording may be lower than the set value. However, the higher the resolution, the more memory will be used.
- For optimal performance of the camcorder, ensure that you purchase a fast speed memory card.



- MMC (Multi Media Card) and MMC Plus are not supported.
- Samsung is not responsible for data loss due to misuse.
- We recommend using a memory card case to avoid data loss caused by moving and static electricity.
- After a period of use, the memory card may get warm. This is normal and is not a malfunction.

RECORDABLE TIME AND CAPACITY

- The following shows the camcorder's maximum recording time and number of images by image resolution and memory capacity.
- For recording videos and photos, please note the approximate maximum limits.

Recordable time for videos

Media		Built-in memory*	Memory Card					
Capacity		16GB	1GB	2GB	4GB	8GB	16GB	32GB
TV Super Fine ( )	720x480 (60i)	380 min.	23 min.	47 min.	95 min.	190 min.	380 min.	760 min.
TV Fine ( )	720x480 (60i)	480 min.	30 min.	60 min.	120 min.	240 min.	480 min.	960 min.
TV Normal ( )	720x480 (60i)	620 min.	38 min.	77 min.	155 min.	310 min.	620 min.	1,240 min.
Web Fine ( )	640x480 (30p)	480 min.	30 min.	60 min.	120 min.	240 min.	480 min.	960 min.
Web Normal ( )	640x480 (30p)	620 min.	38 min.	77 min.	155 min.	310 min.	620 min.	1,240 min.

(Unit: Approximate minutes of recording)

Recordable number of photos

Media		Built-in memory*	Memory Card					
Capacity		16GB	1GB	2GB	4GB	8GB	16GB	32GB
Mode	Resolution							
4:3	800x600	9,999	1,920	3,840	7,680	9,999	9,999	9,999
	1600x1200	9,999	760	1,530	3,040	6,080	9,999	9,999
16:9	848x480	9,999	1,920	3,840	7,680	9,999	9,999	9,999
	1696x960	9,999	760	1,530	3,040	6,080	9,999	9,999

* Built-in memory for SMX-C24 only.

(Unit: Approximate number of images)

1GB= 1,000,000,000 bytes. Actual formatted capacity may be less because the internal firmware uses a portion of the memory.

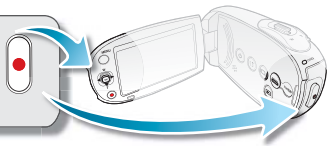
- The figures in the table may differ depending on the actual recording conditions and subject.
- High resolution images occupy more memory space than low resolution images. If you select a higher resolution, there is less space to record videos in the memory.
- The bitrate automatically adjusts to the recording image. Accordingly, the recording time may vary.
- Memory cards bigger than 32GB may not work properly.
- The maximum size of a H.264/AVC video file you can record at one time is 1.8GB.
- You can store up to 9,999 videos or photos in one folder.
- The recording length of a Time Lapse REC may vary depending on settings.

recording

Basic procedures to record videos or photos are described below and on the following pages.

RECORDING VIDEOS

The camcorder provides two **Recording start/stop** buttons. One is on the rear side of the camcorder and the other one is on the LCD panel. Select the one that works best for you.



1. With the battery pack or AC power adaptor attached, open the LCD screen, and then press the **Power** button to turn on the camcorder.
2. If you have the SMX-C24, select the appropriate storage media (built-in or memory card). ➥page 30
   - If you want to use a memory card, insert the card into the card slot before you turn the camera on.
3. Observe the subject on the LCD screen.
4. Press the **Record start/stop** button.
   - The indicator light displays and recording starts.
5. To stop recording, press the **Record start/stop button** again.
6. When you are done recording, turn the camcorder off.

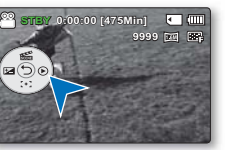
- Samsung is not responsible for any loss or damage due to a memory card problem such as saving failures and abnormal playbacks.
- Be aware that you can not recover damaged recorded data.
- Do not disconnect the power source (battery pack, AC adaptor) during recording. Doing so may cause damage to the storage media or data corruption.

- For on-screen information display. ➥page 21
- Eject the battery pack when you have finished recording to prevent unnecessary battery power consumption.
- For various functions available when you record videos. ➥pages 45~58
- During recording, some button operations are unavailable. (**Mode** button, **MENU** button, etc.)
- Sound is recorded with the internal stereo microphone on the front of the camcorder. Take care that this microphone is not blocked.
- Before recording an important video, make sure to test the recording function to check if there is any problem with the audio and video recording.
- Do not operate the **Power** button or remove the memory card while accessing the storage media. Doing so may damage the storage media or the data on the storage media.
- LCD screen brightness and color can be adjusted from the menu. Adjusting the brightness or color of the LCD screen does not affect the images recorded. ➥page 77
- **This camcorder provides one combined video and photo record mode. You can easily record videos or photos in the same mode without having to change it.**
- You cannot use a locked memory card for recording. You will see a message saying recording is disabled due to the lock.
- You can switch the play mode to the record mode by pressing the **Recording start/stop** or **Mode** button.
- If the power cable/battery is disconnected or recording is disabled during recording, the system is switched to the data recovery mode. While data is being recovered, no other function is enabled. After data recovery, the system will be switched to the STBY mode. When the recording time is short, the data recovery might fail.

QUICK VIEW FUNCTION IN THE RECORD MODE

Using the Quick View function, you can view the most recently recorded video or photo image right after you've recorded.

1. Press the **OK** button in STBY mode right after you've recorded.
   - The Shortcut menu (OK guide) appears on the LCD screen.
2. Press the **Control** button (▶) to view the most recent video (or photo) you have recorded.
   - After the Quick view is finished, your camcorder switches back to the STBY mode.
   - During Quick view, use the **Control** buttons (▲/◀ /▶) and the **OK** button for playback search or for deleting the current file.



The Quick View function is not available under the following conditions:
- If the mode has been changed after you've recorded or the camcorder is connected to a PC with a USB cable
- If the camcorder has been restarted after you've recorded
- After playing Quick View.

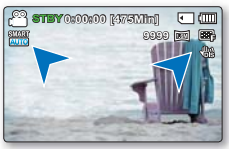
- Quick View playback runs at a normal speed. FF/REW/F.ADV/Slow functions can be used at the same time in Single view. ➥page 42
- The volume control is not available during playback in Quick View.
- You cannot select Quick View while Smart Auto mode is in operation.
- If you press the **Recording start/stop** button or **Zoom** lever during playback in Quick View, the playback is stopped and the camcorder switches to the STBY mode.

RECORDING WITH EASE FOR BEGINNERS : SMART AUTO MODE

User-friendly Smart Auto optimizes your camcorder for the recording conditions automatically, providing beginners with the best performance.

1. In STBY mode, press the **SMART AUTO** button.
   - The Smart Auto (SMART AUTO) and Anti-Shake (HDIS) ( ) indicators appear on the LCD screen.
2. Align your subject in the frame.
   - The camcorder selects a scene automatically.
   - An appropriate mode icon will appear at the top left of the screen.

	Appears when recording objects in broad daylight.		Appears in recording portraits at night.
	Appears when recording objects in landscapes.		Appears when recording objects indoors.
	Appears when recording objects in bright backgrounds.		Appears when recording portraits.
	Appears when recording objects in landscapes at night.		Appears when recording close-up objects.



<Recording portrait>

3. Press the **Recording start/stop** button to record videos.
   - To record photos, press the **Photo** button.
4. To cancel Smart Auto mode, press the **SMART AUTO** button again.

- **Buttons not available in Smart Auto operation: MENU** button / **OK** button/ etc.
  If you press buttons unavailable in Smart Auto mode, the message **"Release the Smart Auto"** appears on the screen. To use these buttons, release the Smart Auto mode first.
- You cannot set or release the Smart Auto mode during recording.
- The camcorder may not detect portrait mode depending on the direction of the light or the brightness of faces.
- Depending on the light, distance between subjects, and camcorder-shake, the camcorder can detect the same scene differently.
- When the camcorder detects more than two scenes at the same time, Smart Auto icon priority order is as follows: Night Portrait > Portrait > Macro > White > Landscape > Night > Indoor
  For example,
  a) If portrait and Indoor are detected simultaneously, then portrait is actived and the corresponding icon displays.
  b) If night portrait and night are detected at the same time, then night portrait is actived and the corresponding icon displays.

TAKING PHOTOS

Captures a moving subject instantly and saves the scene as a photo image. You can take photos with the **Photo** button.

1. Open the LCD Screen and press the **Power** button to turn on the camcorder.
   - If you have the SMX-C24, set the appropriate storage media. ➥page 30 (If you want to record on a memory card, insert the memory card before you begin.)
2. Check the subject on the LCD screen.
3. Press the **Photo** button.
   - Shutter sound is heard. Photo indicators ▶▶▶ appear on the screen, and the photo image is recorded.
   - While the camcorder is saving a photo image to the storage media, you cannot take another photo.
4. When you are done taking photos, turn the camcorder off.

- The maximum number of recordable images may vary depending on the subject and resolution setup.
- Audio is not recorded with the photo image on the storage media.
- If the focus is not clear enough, adjust it manually.
- You can adjust the LCD screen brightness and color from the menu. Adjusting the brightness or color of the LCD screen does not affect the images recorded. ➥page 77
- Do not turn off the camcorder or remove the memory card when taking photos as it may damage the storage media or data.
- Photo image files recorded by your camcorder conform to the DCF (Design rule for Camera File system) universal standard established by the JEITA (Japan Electronics and Information Technology Industries Association).
- DCF is an integrated image-file format for digital cameras. DCF iImage files can be used on all digital devices conforming to DCF.
- Available photo image resolutions are 1696X960 and 848X480 in 16:9 aspect ratio and 1600X1200 and 800X600 in 4:3 aspect ratio. To switch to 4:3, release 16:9 mode. ➥page 47
- **This camcorder provides one combined video and photo record mode. You can easily record videos or photos in the same mode without having to change it.**

ZOOMING IN AND OUT

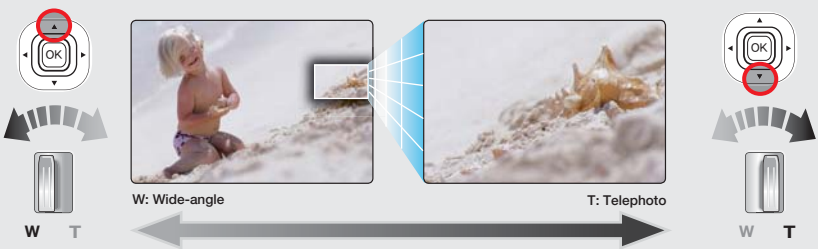
- You can zoom with the zoom lever or the **Control** (W/T) button on the LCD panel.
- Zoom magnification over 10x uses digital image processing, and is therefore called digital zoom. Digital zooming can increase image size up to 1200x.
  Set **"Digital Zoom"** to **"On."** ➥page 55

To zoom out

Slide the Zoom lever towards **W** (wide-angle). (Or press the **Control** button (▲) on the LCD panel.)

To zoom in

Slide the Zoom lever towards **T** (telephoto). (Or press the **Control** button (▼) on the LCD panel.)



Tip When using the zoom function, you can decrease its speed by moving the Zoom (W/T) lever slowly. Moving it quickly increases the zoom speed. However, if you use the Zoom (W/T) button on the display, you cannot adjust the zoom speed.

- The minimum possible distance between camcorder and subject while maintaining sharp focus is about 5cm (about 1.96 inch) for wide-angle and 1m (about 39.4 inch) for telephoto.
- Zooming during a recording may cause the camcorder to record the sound of the zoom lever or zoom button.
- Optical zoom preserves image quality, but during digital zoom, the image quality may suffer.
- Fast zooming or zooming in on a far subject may cause slow focus. In this case, use **"Manual Focus."** ➥page 51
- When you do hand held recording, we recommend you use **"Anti-Shake (HDIS)"** if you zoom in on the subject. ➥page 52
- Frequent use of the zoom function consumes more power.

playback

You can view recorded videos and photos in thumbnail index view and play them in various ways. In the thumbnail index view, you can directly select and display a desired image without using fast forwarding or rewinding.

CHANGING THE PLAYBACK MODE

- Pressing the **Mode** button changes the operation mode to Record (/) and Play (/) mode in turn.
- Select Record and the recorded videos or photos are displayed in thumbnail index view.
  When switching to Play mode after recording a video, the videos thumbnail index view appears.
  When switching to Play mode after recording a photo, the photos thumbnail index view appears.

How to change between video and photo thumbnail view.

- You can easily switch between video and photo thumbnail view using the zoom lever.

PLAYING VIDEOS

This function works only in Video Play mode.
You can find a desired video clip quickly using the thumbnail index view.

PRECHECK: SMX-C24 ONLY!

Set the appropriate storage media. ➥page 30
If you want to playback images on a memory card, insert the memory card before you begin.

1. Press the **Mode** button to select the Play mode.
   - The thumbnail index view appears. The thumbnail highlight is on the latest created or played file.
   - Playing time of the selected file and moving thumbnail appear on the screen.
2. Select the Video thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
3. Use the **Control** button (▲ /▼ /◀ / ▶) to select the desired videos, and then press the **OK** button.
   - The Shortcut menu for playback is displayed for a while.
   - The selected videos are played according to the Play Option setting. ➥page 59
   - To stop playback and return to the thumbnail index view, move the zoom lever.

- If there is no file stored to view, the message **"Empty"** appears.
- Your camcorder may not playback the following videos:
  - Videos you edited or renamed on a PC.
  - Videos you recorded on devices other than the camcorder.
  - Videos you recorded in file formats the camcorder does not support.
- The built-in speaker automatically turns off when you connect the Audio/Video cable to the camcorder. (When you connect the camcorder to an external device, adjust the volume on the connected external device.)
- You can playback recorded videos on a PC or a TV. ➥pages 88, 95
- You can upload recorded videos or photos to YouTube, Flickr or Facebook using Intelli-studio. ➥page 89
- For various functions available during playback, see "playback options." ➥pages 59~69
- Use the Quick View function if you want to preview the last recorded videos or photos. ➥page 36

Adjusting the volume

Press the **Control** button (▲ / ▼) to increase or decrease the volume.

- The volume bar disappears after approximately 3 seconds.
- You can hear the recorded sound from the built-in speaker.
- You can set the level anywhere between 0 and 10.
  (If you close the LCD screen while the camcorder is playing, you will not hear the sound from the speaker.)
- The volume bar does not appear if you have inserted the Audio/Video cable jack.

Various Playback Operations

Still playback (pause) (▶/ II)

- Press the **OK** button during playback.
  - To resume normal playback, press the **OK** button again.

Search playback (◀x2I / I x2▶)

- During playback, press and hold the **Control** button (▶) for forward search or the **Control** button (◀) for reverse search.
- Pressing the **Control** button (◀ /▶) repeatedly increases the search speed for each direction repeatedly.
  - RPS (Reverse Playback Search) rate: x2→x4→x8→x16
  - FPS (Forward Playback Search) rate: x2→x4→x8→x16
- To resume normal playback, press the **OK** button.

Skip playback (I◀◀/▶▶I)

- During playback, press the **Control** button (▶) to locate the start point of the next file. Pressing the **Control** button (▶) repeatedly skips files in the forward direction.
- During playback, press the **Control** button (◀) to locate the start point of the current file. Pressing the **Control** button (◀) repeatedly skips files in the reverse direction.
- Press the **Control** button (◀) within 3 seconds from the start point and the first image of the previous file is skipped.

Frame-by-frame playback (◀II / II▶)

- In pause mode, use the **Control** button (◀ /▶) to move the video forward or backward one frame at a time.
  - To resume normal playback, press the **OK** button.

Slow motion playback (◀I / I▶)

- During pause, holding the **Control** button (◀ /▶) reduces the playback speed.
- During slow motion playback, pressing the **Control** button repeatedly (◀ /▶) changes the playback speed.
  - Forward slow playback rate: x1/2 → x1/4 → x1/8 → x1/16
  - Reverse slow playback rate: x1/2 → x1/4 → x1/8 → x1/16
  - To resume normal playback, press the **OK** button.
- Recorded sound does not play in slow motion playback.

VIEWING PHOTOS

This function works only in Photo Play mode.
You can find and view desired photos quickly using the thumbnail index view.

PRECHECK:SMX-C24 ONLY!

Set the appropriate storage media. ➥page 30
If you want to playback images on a memory card, insert the memory card before you begin.

1. Press the **Mode** button to select the Play mode.
   - The thumbnail index view appears. The thumbnail highlight is on the latest created or played file.
2. Select the Photo thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
3. Use the **Control** button (▲/▼/◀ /▶) to select the desired photos, and then press the **OK** button.
   - The Shortcut menu for playback is displayed for a while.
   - To view the previous or next photo, press the **Control** button (◀ /▶).
   - To return to the thumbnail index view, move the zoom lever.

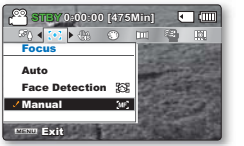
- Do not power off or eject the memory card during photo playback. Doing so may damage the recorded data.
- Your camcorder may not playback the following photo files normally:
  - A photo with its file name changed on a PC.
  - A photo recorded on other devices.
  - A photo with a file format not supported on this camcorder (does not conform to DCF standards).

- Loading time may vary depending on the size and quality of the selected photo.
- Use the Quick View function if you want to preview the last recorded photos. ➥page 36

CHANGING THE MENU SETTINGS

You can change the menu settings to customize your camcorder. Access the desired menu screen by following the steps below, and then changing the various settings.

1. Open the LCD Screen and press the **Power** button to turn on the camcorder.
2. Press the **Mode** button to select the play mode.
3. Press the **MENU** button.
   - The menu screen appears on the LCD screen.
4. Press the **Control** button (◀ / ▶) to select **"Focus."**
5. Select the desired item with the **Control** button (▲ / ▼, OK).
   - Adjust the set value according to the selected items.
   - Adjust the focus with the **Control** button (◀ / ▶) for **"Manual Focus."**
   - Press the **MENU** button to exit the menu.



- You cannot select the dimmed menu items during setting menus.
  For detailed information about the dimmed menu item, see 'Troubleshooting'. ➥page 108
- From the next page, the setting guide is presented under the basic state for your easy understanding. The setting steps varies depending on the setting status of your camcorder.

RECORDING MENU ITEMS

- Accessing items in the menu depends on the operation mode.
- For operation details, see the corresponding page. ➥pages 45~58

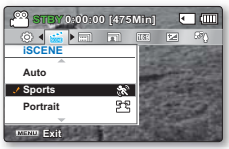
● : Accessible

Items	Record mode	Default value	Page
iSCENE	●	Auto	45
Video Resolution	●	TV Fine	46
Photo Resolution	●	1696x960 (16:9)	47
16:9 Wide	●	On	47
EV	●	0	48
Back Light	●	Off	49
Focus	●	Auto	50
Anti-Shake (HDIS)	●	Off	52
Digital Effect	●	Off	53
Fader	●	Off	54
Wind Cut	●	Off	55
Digital Zoom	●	Off	55
Time Lapse REC	●	Off	56
Guideline	●	Off	58
Settings	●	-	71

iSCENE

This camcorder automatically sets the shutter speed and aperture according to the subject's brightness for optimum recording. You can also select one of a number of setting modes that automatically match the shutter speed and aperture to the subject's conditions, the recording environment, or your purpose for shooting.

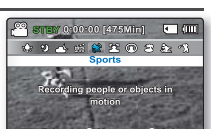
1. Press the **MENU** button → **Control** button (◀ / ▶) → **"iSCENE."**
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



Submenu items

- **Auto:** You can shoot images in Auto adjustment mode.
- **Sports ( ):** Reduces blurring when recording rapidly moving subjects such as in golf or tennis. If the Sports mode is used under a fluorescent light, the image may flicker. In this case, use the Auto mode for recording.
- **Portrait ( ):** Creates a shallow depth of field so that the person or subject appears against a softened background. The portrait mode is most effective when used outdoors. EV value is automatically adjusted to the optimal.
- **Spotlight ( ):** Prevents overexposure of subject portrait face, etc. when strong light strikes the subject, as in a wedding or on stage.
- **Beach ( ):** Where sunlight is intense such as on a beach.
- **Snow ( ):** Where refl ection of light is intense such as in a snowfield.
- **High Speed ( ):** Reduces blurring objects in rapid motion.
- **Food ( ):** Recording close-up objects in high saturation.
- **Waterfall ( ):** In conditions such as waterfall or a fountain.
- **Daylight ( ):** Recording in broad daylight.
- **Cloudy ( ):** Recording in cloudy weather.
- **Fluorescent ( ):** Recording under white fluorescent lights.
- **Tungsten ( ):** Recording under a white tungsten lamp.
- **Night ( ):** Recording in low light.
- **Darkness ( ):** Recording in extremely low light.

Tip You can also set iSCENE in the shortcut menu. ➥page 26

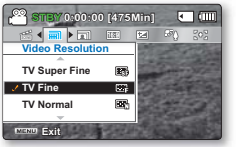


The icon for the iSCENE you selected appears in the on-screen information display. However, no icon appears when you select Auto mode.

Video Resolution

You can select the resolution of a video to be recorded. This camcorder can record in **"TV Super Fine", "TV Fine", "TV Normal", "Web Fine"** and **"Web Normal"** modes. The **"TV Fine"** mode is set as the factory default.

1. Press the **MENU** button → **Control** button (◀ / ▶) → **"Video Resolution."**
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



Submenu items

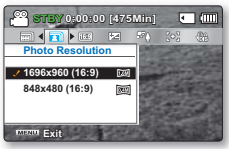
- **TV Super Fine ( ):** Videos recorded in 720x480 (60i) resolution at super-fine image quality.
- **TV Fine ( ):** Videos recorded in 720x480 (60i) resolution at fine image quality.
- **TV Normal ( ):** Videos recorded in 720x480 (60i) resolution at normal image quality.
- **Web Fine ( ):** Videos recorded in 640x480 (30p) resolution at fine image quality. Supports viewing with the optimal resolution on a PC.
- **Web Normal ( ):** Videos recorded in the 640x480 (30p) resolution at normal image quality. Supports viewing with the optimal resolution on a PC.

- You can record at five resolution levels: **"TV Super Fine", "TV Fine", "TV Normal", "Web Fine"** or **"Web Normal."** However, the better the resolution, the more memory the camcorder uses.
- The recording time available in memory depends on the resolution of a video to be recorded. ➥page 34 The Video resolution settings of **"Web Fine"** and **"Web Normal"** record videos in the 4:3 aspect ratio even when you set the aspect ratio to 16:9.

Photo Resolution

You can select the resolution of the photo image to be recorded. For information about memory image capacity. ➥page 34

1. Press the **MENU** button → **Control** button (◀ / ▶) → **"Photo Resolution."**
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



Submenu items

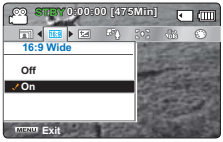
- **1696x960 (16:9) (16:9):** Records in 1696x960 resolution.
- **848x480 (16:9) (16:9):** Records in 848x480 resolution.
- **1600x1200 (4:3) (2M):** Records in 1600x1200 resolution.
- **800x600 (4:3) (SVGA):** Records in 800x600 resolution.

- Photos recorded by your camcorder may not be displayed in another device if the device does not support high resolution.
- For photo development or printing, the higher the resolution, the finer the image quality.
- The number of images your camcorder can record depends upon the available memory and picture resolutions. ➥page 34
- High resolution images occupy more memory space than low resolution images. If you select a higher resolution, there is less space to store photos in the memory.
- The submenu items of Photo Resolution vary depending on the aspect ratio you select.

16:9 Wide

You can select the desired LCD display aspect ratio for recording or playback (16:9 Wide/4:3 Standard).

1. Press the **MENU** button → **Control** button (◀ / ▶) → **"16:9 Wide."**
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



Submenu items

- **Off:** Disables the function. Displays the image in 4:3 aspect ratio. Select to use the standard display aspect ratio of 4:3 on the screen.
- **On:** Recording and viewing in 16:9 aspect ratio.

- In **"16:9 Wide"** mode, you cannot use the following functions : **"Mosaic", "Mirror", "Step printing"** (Digital Effect). If you want to use the following functions, set the **"16:9 Wide"** menu to **"Off"** first.
- Please set the aspect ratio before recording. The default setting is **"16:9 Wide : On."**
- Video resolution settings of **"Web Fine"** and **"Web Normal"** record videos in the 4:3 aspect ratio even when you set it to 16:9.

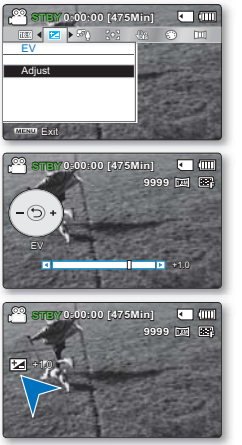
EV (Exposure Value)

The camcorder usually adjusts the exposure automatically.
You can also manually adjust the exposure to match the recording conditions.

Setting the exposure manually:

When you manually set the exposure, the default setting appears initially and is automatically adjusted according to the environmental light conditions.

- Press the **Control** button (◀ / ▶) to adjust the exposure while viewing the image on the LCD screen.
  - Confirm your selection by pressing the **OK** button.
  - You can set the exposure value between **"-2.0"** and **"+2.0"**
  - If you set the exposure to manual, the higher the exposure, the brighter the recorded photo will be.
  - Exposure value setting will be applied and (EV ±0) indicator and setting value are displayed.



Manual exposure is recommended in the following situations :

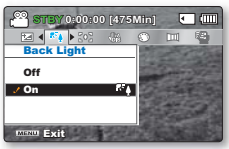
- When shooting using reverse lighting or when the background is too bright.
- When shooting against a reflective natural background such as at the beach or when skiing.
- When the background is overly dark or the subject is bright.

- You can also set the exposure in the shortcut menu. ➥page 27
- The shutter speed also varies automatically depending on the EV value.

Back Light

When the subject is lit from behind, this function compensates for the lighting so that the subject is not too dark.

1. Press the **MENU** button → **Control** button (◀ / ▶) → **"Back Light."**
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



Submenu items

- **Off:** Disables the function.
- **On ( ):** Backlight compensation is executed. Backlight compensation brightens the subject quickly.

Back lighting influences recording in these situations when the subject is darker than the background:

- The subject is in front of a window.
- The subject is against a snowy background.
- The subject is outdoors and the background is overcast.
- The light sources are too bright.
- The person to be recorded is wearing white or shiny clothes and is placed against a bright background:
- The person's face is too dark to distinguish his/her features.

Focus

- The camcorder usually focuses on a subject automatically (auto-focus).
- You can also manually focus on a subject.

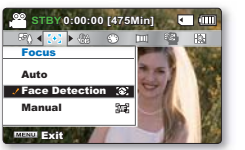
Submenu items

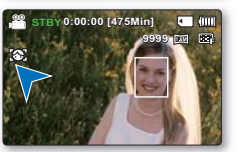
- **Auto**: In most situations, it is better to use the automatic focus feature, as it enables you to concentrate on the creative side of your recording.
- **Face Detection ( )**: Detects faces automatically and then adjusts settings automatically for optimal recording.
- **Manual ( )**: Manual focusing may be necessary under certain conditions that make automatic focusing difficult or unreliable.

Face Detection

This function detects and recognizes face-like shapes and adjusts focus, color, and exposure automatically. Also, it adjusts recording conditions to optimise for the face detected.

- Press the **Control** button (▲ / ▼) → **"Face Detection"** → **OK** button.
  - Detects a face and displays a frame on it. The detected face image is optimized automatically.





- The Face Detection indicator ( ) and Face Detection frame ( ) are not recorded.
- Framing a person's face while Face Detection is set will adjust focus and exposure to optimal values automatically.
- Face Detection may not operate depending on the recording conditions. For example, the Face Detection Frame may appear when framing a "face-like" shape, even when the subject is not a person's face. If this occurs, turn off the Face Detection feature.
- The Face Detection feature will not work when framing the side of a person's face or operating while lack of illumination. You must be facing them "head-on" or occupying enough illumination.

Focusing manually during recording:

This camcorder automatically focuses a subject from close-up to infinity. However, the correct focus may not be obtained depending on the recording conditions. In this case, use the manual focus mode.

1. Press the **Control** button (▲ / ▼) to select **"Manual."**
   - The manual focus adjustment indicator appears.
2. Press the **Control** button (◀ / ▶) to select the desired indicator to adjust the focus, and then press the **OK** button.

Focusing on a nearer subject manually

To focus on a nearer subject, press the **Control** button (◀) to the indicator ( ).

Focusing on a farther subject manually

To focus on a farther subject, press the **Control** button (▶) to the indicator ( ).

- The nearer or farther icon (/) appears between the indicators when focus adjustment reaches the end.
- The adjusted value is applied right after pressing the **Control** button (◀ / ▶) to adjust the focus.
- When the manual focus setting is applied, the ( ) indicator is displayed.

<Nearer subject>

<Further subject>

Manual focus is recommended when :

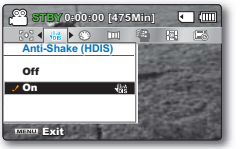
- A shot contains several objects, some close to the camcorder, others further away.
- A person is enveloped in fog or surrounded by snow.
- A shot contains very shiny or glossy surfaces such as that of a car.
- People or objects are moving constantly or quickly such as an athlete or a crowd.

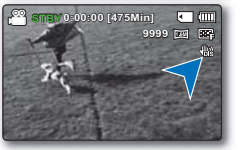
- You can easily adjust the focus using Shortcut menu button. ➥page 27
- Manual focusing focuses on a point in the framed scene while auto focusing focuses on the center area automatically.
- Use the zoom function to catch the desired target before manually adjusting the focus. If you use the zoom function after manual focusing, refocusing is required.
- Before focusing manually, check if the **"Digital Zoom"** is turned off. While **"Digital Zoom"** is turned on, manual focusing will not focus with accuracy. Turn the **"Digital Zoom"** off. ➥page 55

Anti-Shake (HDIS)

When you use zoom to record a magnified subject image, Anti-Shake corrects fuzziness in the recorded image.

1. Press the **MENU** button → **Control** button (◀ / ▶) → **"Anti-Shake (HDIS)."**
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.





Submenu items

- **Off:** Disables the function.
- **On ( ):** Compensates for unstable images caused by camcorder-shake, particularly at high magnification.

Anti-Shake (HDIS) provides a more stable image when you:

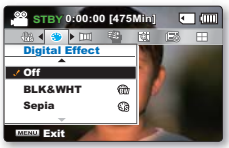
- Record while zooming
- Record small objects
- Record while walking or moving
- Record through the window of a moving vehicle

- Smart Auto mode automatically sets **"Anti-Shake (HDIS)"** to **"On."**
- When **"Anti-Shake (HDIS)"** is **"On"**, is specified, there will be a slight difference between the actual movement and the movement on screen.
- Large camcorder shake may not be entirely corrected even if **"Anti-Shake (HDIS) : On"** is specified. Firmly hold the camcorder with both hands.
- We recommend that you turn **"Anti-Shake (HDIS)"** to **"Off"** when using the camcorder on a desk or tripod.
- When you record photos with 10x or more magnification and the **"Anti-Shake (HDIS)"** is **"On"**, in dim places, after-images may stand out. In this case, we recommend using a tripod (not supplied) and turning the **"Anti-Shake (HDIS)"** to **"Off."**

Digital Effect

- The digital effect enables you to give a creative look to your recording.
- Select the appropriate digital effect for the type of photo that you wish to record and the effect you wish to create.
- There are 10 different digital effect options.

1. Press the **MENU** button → **Control** button (◀ / ▶) → **"Digital Effect."**
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



In **"16:9 Wide"** or **"Anti-Shake (HDIS)"** mode, you can not use the following functions : **"Mosaic"**, **"Mirror"**, **"Stepprinting"** (Digital Effect). If you want to use the following functions, set the **"16:9 Wide"** and **"Anti-Shake (HDIS)"** menu to **"Off"** first.

Examples of 10 digital effect options

BLK&WHT ( )
Changes the images into Black and White.

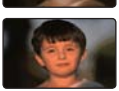
Negative ( )
Reverses the colors and the brightness, creating the look of a negative.

Emboss ( )
This mode creates a 3D effect (embossing).

Mirror ( )
This mode cuts the image in half and make mirrored image on the other half.

Cosmetic ( )
This mode helps correct facial imperfections.

Sepia ( )
This mode gives the images a reddish brown pigment.



Art ( )
Adds artistic effects to an image.

Mosaic ( )
This mode applies a mosaic effect to the image.

Pastel ( )
This mode applies a pale pastel drawing effect to an image.

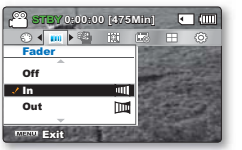
Step printing ( )
This moded records the image in segments.

recording options

Fader

You can give your recording a professional look by using special effects such as fade in at the beginning of a sequence or fade out at the end of a sequence.

1. Press the **MENU** button → **Control** button (◀ / ▶) → **"Fader."**
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



Submenu items

- **Off:** Disables the function.
- **In ( ):** As soon as you start recording, the fader starts fade in.
- **Out ( ):** When the recording is done, the fader starts fade out.
- **In-Out ( ):** When you start or stop recording, the fader fades in or fades out accordingly.

Fade in

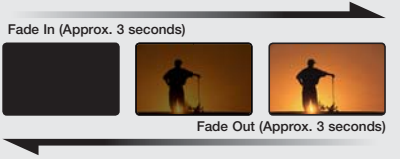
Press the **Recording start/stop** button when **"Fader"** is set to **"In."**
Recording starts with a dark screen, and then the image and sound are faded in.

Fade out

Press the **Recording start/stop** button when **"Fader"** is set to **"Out."**
When recording stops, the image and sound are faded out.

Fade in-out

Press the **Recording start/stop** button when **"Fader"** is set to **"In-Out."** Recording starts with a dark screen, and then the image and sound are faded in. When recording stops, the image and sound are faded out.

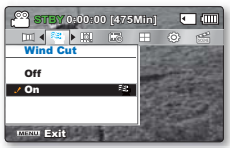


This function is disabled after being used one time. To use it again, you must reset it.

Wind Cut

You can reduce wind noise when recording sound with the built-in microphone. If **"Wind Cut : On"** is set, the low-frequency components in the sound picked up by the microphone will be cut off during recording. This makes it easier to hear voices and sound during playback. Use Wind Cut when recording in windy places such as a beach.

1. Press the **MENU** button → **Control** button (◀ / ▶) → **"Wind Cut."**
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



Submenu items

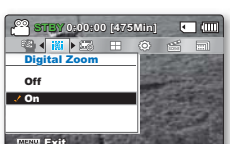
- **Off:** Disables the function.
- **On ( ):** Minimizes wind noise or other noise while recording.

When **"Wind Cut"** is **"On"**, some low frequency sound is eliminated along with the sound of the wind.

Digital Zoom

You can select the maximum zoom level if you want to zoom to a level greater than 10x (the default setting) during recording. Zoom up to 10x is achieved optically, and after that, zoom up to 1200X is achieved digitally. Note that the image quality decreases when you use the digital zoom.

1. Press the **MENU** button → **Control** button (◀ / ▶) → **"Digital Zoom."**
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



Submenu items

- **Off:** Only optical zoom is available up to 10x.
- **On:** Digital zoom is available up to 1200x. Moving the zoom lever displays the digital zoom bar.

This right side of the bar shows the digital zooming zone.
The zooming zone appears when you move the zoom lever.

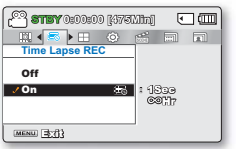
- The image quality may deteriorate depending on how much you zoom in on the subject.
- Maximum zooming may result in lower image quality.

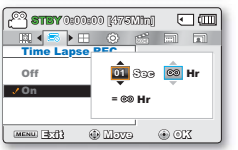
Time Lapse REC

Time Lapse REC records single video frames at specific intervals you can set, and plays them as one video clip. This function is useful for observing the movement of clouds, the changes in daylight or blooming flowers, etc.

Setting the Time Lapse REC mode:

To record in the Time Lapse REC mode, you need to set the recording interval and total recording time on the Time Lapse REC screen in the menu.



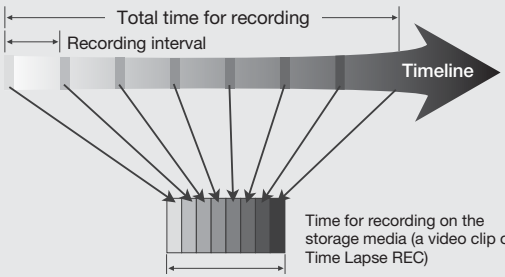


1. Press the **MENU** button → **Control** button (◀ / ▶) → **"Time Lapse REC."**
2. Press the **Control** button (▲ / ▼) → **"On"** → **OK** button.
   - The recording interval and total time for recording items entry fields appear.
3. Set a desired recording interval (**"Sec"**) with the **Control** button (▲ / ▼). Choose 1 sec, 3 sec, 5 sec, 10 sec, 15 sec, or 30 sec.
4. Move to total recording time using the **Control** button (◀ / ▶) and set a desired total recording time (**"Hr"**) in the same way.
5. Press the **OK** button to finish setting the times, and press the **MENU** button to exit the menu.
6. After setting the Time Lapse REC mode, press the **Recording start/stop** button. The Time Lapse REC starts.
   - The still images are stored one by one according to the recording interval and total recording time.

Submenu items

- **Off:** Disables the function.
- **On ( ):** Interval (**"Sec"**): Image of the subject is captured at set interval. Images are automatically shot a frame at a time at the specified interval and stored in the storage media. **01Sec → 03Sec → 05Sec → 10Sec → 15Sec → 30Sec** (Seconds)
  REC Limit (**"Hr"**): While you manually set the preparatory settings (recording interval and total recording time), the approximate time-lapse recording time is automatically displayed on the menu screen.
  ∞ **Hr → 24Hr → 48Hr → 72Hr** (Hours)

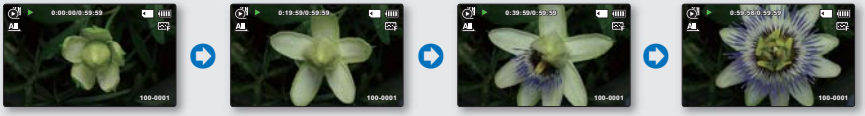
Example of Time Lapse REC



Time Lapse REC records image frames at the predefined interval over the total recording time to produce a time-lapse video.

Time Lapse REC is useful for filming in the following situations:

- Blooming flowers
- Insect's skin-casting
- Clouds rolling by in the sky



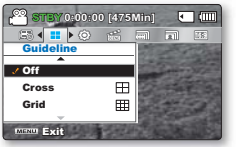
- This function is disabled after being used one time. To use it again, you must reset it.
- 30 captured images compose a video of 1 second length. Since the minimum length of a video your camcorder can save is one second, the interval you set defines how long total recording time should be. For example, if you set the interval to **"30 Sec,"** total recording time should be set to at least 15 minutes to record a minimum video length of 1 second (30 images).
- Once the Time Lapse REC finishes recording for its total recording time, it switches to standby mode.
- Press the **Recording start/stop** button if you want to stop the Time Lapse REC.
- Audio is not recorded during Time Lapse Recording.
- If a video recording fills up 1.8GB of storage media, a new recording file is automatically started at that point.
- If the battery is exhausted during Time Lapse REC, the camcorder saves the recording up to that point and switches to standby mode. After some time, it displays a warning message, then turns off automatically.
- If memory runs out during a Time Lapse REC, the camcorder switches to standby mode after saving what was recorded so far.
- We recommend using the AC power adaptor when using the Time Lapse REC function.
- When a time lapse recording starts, a message of **"Time Lapse Recording"** blinks on the screen and it appears as if the screen is stopped. This is normal, Do not remove the power source or memory card from the camcorder.

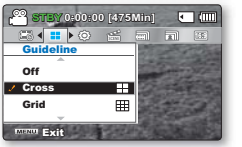
recording options

Guideline

- Guideline displays straight line patterns on the LCD screen that can help you set the image composition when recording images.
- The camcorder provides 3 types of guidelines.

1. Press the **MENU** button → **Control** button (◀ / ▶) → **"Guideline."**
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.





Submenu items

- **Off:** Disables the function.
- **Cross ( ):** Placing the subject at the center cross point puts the subject in the middle of the frame.
- **Grid ( ):** For recording multiple subjects. Putting subjects at or near the grid cross points creates a balanced composition.
- **Safety Zone ( ):** Positioning subjects within the Safety Zone rectangle ensures they will be recorded.

- Positioning a subject at the cross point of a guideline provides a balanced composition.
- Guidelines are not recorded.

PLAYBACK MENU ITEMS

- Accessible items in the menu vary depending on the operation mode.
- See pages 40-43 for playback information and button operation.
- See pages 59-69 for details on menu items available during playback.

● : Accesible
× : Not accesible

Items		Video Play ( )	Photo Play ( )	Default value	Page
Play Option		●	×	Play All	59
Delete		●	●	-	60
Protect		●	●	-	61
Story-Board Print		●	×	-	62
Copy (SMX-C24 only)		●	●	-	64
Edit	Divide	●	×	-	65
	Combine	●	×	-	66
Share Mark		●	×	-	67
Slide Show		×	●	-	68
Slide Show Option		×	●	-	69
File Info		●	●	-	69
Settings		●	●	-	71

In general, the operation of functions in both the thumbnail display and full image display are the same, although their detailed options may be different.

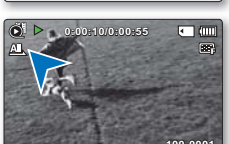
Play option

You can choose a specific playback option according to your preference.

PRECHECK!

Press the **Mode** button to select the Play mode. ➥page 19

1. Select the Video or Photo thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
2. Press the **MENU** button → **Control** button (◀ / ▶) → **"Play Option."**
3. Select an option by pressing the **Control** button (▲ / ▼) and then press the **OK** button.
   - When you playback the video, a displayed indicator of the selected Play Option appears on the screen.



Submenu items

- **Play All ( ):** Plays back from the selected video to the last video.
- **Play One ( ):** Plays the video you selected once.
- **Repeat All ( ):** Plays all videos repeatedly.
- **Repeat One ( ):** Plays the video you selected repeatedly.

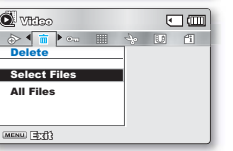
Delete

You can erase your recordings one by one, or all at once.

PRECHECK!

Press the **Mode** button to select the Play mode. ➥page 19

1. Select the Video or Photo thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
2. Press the **MENU** button → **Control** button (◀ / ▶) → **"Delete."**
3. Select an option by pressing the **Control** button (▲ / ▼) and then press the **OK** button.
4. If you choose Selected Files, a pop-up selection menu appears. Move to an item you want to delete using the **Control** buttons (◀ / ▶), and then press the **OK** button to select it.
5. Repeat Step 4 for each item you want to delete.
6. Press the **MENU** button to delete the items you selected.



Submenu items

- **Select Files:** Deletes individual selected videos or photos. To delete individual videos or photos, select the desired videos or photos to be deleted by pressing the **OK** button. Then press the **MENU** button to delete. The indicator (🗑) is displayed on the selected videos or photos. Pressing the **OK** button toggles between the selection and release.
- **All Files:** Deletes all videos or photos.

- Once the file is deleted, it cannot be restored again.
- Note that removing the battery pack or disconnecting the AC power adaptor while you delete files may damage the storage media.

- To protect important images from accidental deletion, activate image protection. ➥page 61
- The protect ( ) indicator blinks if you try to delete an image that was previously protected. ➥page 61
- You must release the protect function to delete the image.
- If the write protection tab on the memory card is set to lock, you cannot delete. ➥page 32
- You can also format the storage media to delete all the images at once. Be aware that all files and data including protected files are erased when you format.
- Delete may not operate if the battery charge is insufficient. If available, use the AC adaptor while deleting to ensure continuous power.

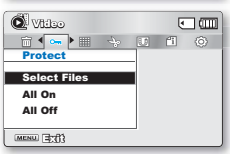
Protect

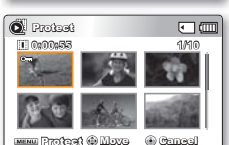
- You can protect important saved videos or photos from accidental deletion.
- Protected images will not be deleted unless you release the protection or format the memory.

PRECHECK!

Press the **Mode** button to select the Play mode. ➥page 19

1. Select the Video or Photo thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
2. Press the **MENU** button → **Control** button (◀ / ▶) → **"Protect."**
3. Select an option by pressing the **Control** button (▲/▼), and then press the **OK** button.
4. The pop-up selection menu will appear depending on the selected menu item. In this case, select the desired item with the **Control** buttons (◀ / ▶) and the **OK** button.
5. Repeat Step 4 for each item you want to protect.
6. Press the **MENU** button to protect the items you selected.





Submenu items

- **Select Files:** Protects selected videos or photos from delection. To protect individual videos or photos, select the desired videos or photos by pressing the **OK** button. Then press the **MENU** button to confirm. The indicator ( ) is displayed on the protected videos or photos. Pressing the **OK** button toggles between selection and release.
- **All On:** Protects all videos or photos.
- **All Off:** Cancels the protection for all videos or photos.

- Protected videos or photos display the protection indicator ( ) when you display them.
- If the write protection tab on the memory card is set to lock, you cannot set image protection.

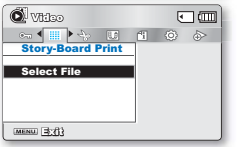
Story-Board Print

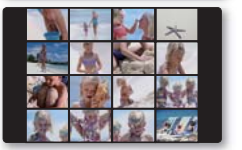
This function captures 16 still images arbitrarily from the selected video and saves them into the storage media. It presents a quick overview of your video, helping you to understand the overall topic.

PRECHECK!

Press the **Mode** button to select the Play mode. ➥page 19

1. Select the Video thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
2. Press the **MENU** button → **Control** button (◀ / ▶ /OK) → **"Story-Board Print"** → **"Select File."**
3. Use the **Control** button (▲ /▼ / ◀ / ▶) to select the desired video, and then press the **OK** button.
   - A message appears asking for your confirmation.
4. Select **"Yes."**
   - The printed storyboard image files appear on the LCD screen for about 3 seconds.
   - A single 16 still image that consists of 16 images selected arbitrarily from the selected video will be saved in the storage media.





- Storyboard images are displayed in 4:3 aspect ratio. Hence, it may not display the entire image on the LCD screen. On a computer, it will display the entire image.
- **Using the iVIEW button, you can preview storyboard images to be printed.** **➥page 63**
- The storyboard printing may not show 16 i-Frame thumbnails in following case:
  - The recorded video is too short. For Story-Board to extract 16 i-Frame thumbnails from a video, the video's recorded time must be longer than 8 seconds.

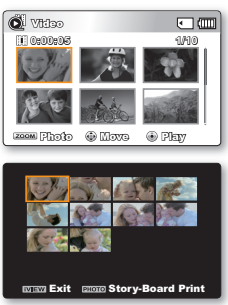
Using iVIEW

This function provides a preview of a storyboard to be printed, giving you a digest of a recorded video so you don't need to review the entire video.

PRECHECK!

Press the **Mode** button to select the Play mode. ➥page 19

1. Select the Video thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
2. Use the **Control** button (▲ / ▼ / ◀ / ▶) to select the desired videos, and then press the **iVIEW** button.
   - 16 i-Frame images appear on the LCD screen.
   - The images from the selected video are selected arbitrarily, and compose the preview of the storyboard to be captured.
   - If you want to save the storyboard image on the storage media, press the **Photo** button. You can find the saved storyboard image in the photo play mode. ➥page 43



In STBY mode, the button functions in the same manner as the SMART AUTO button.

- STBY mode: Press the button. → Smart Auto function is operated. ➥page 37
- Play mode : Press the button. → iVIEW function is operated.

- If the recorded video is less than 8 seconds long, all 16 i-Frame thumbnails will not be extracted.
- This function is available only in the video thumbnail index view screen.

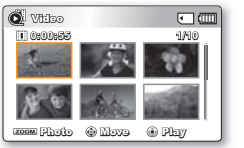
Copy (SMX-C24 only)

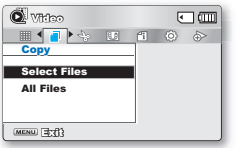
Movies and photos stored in the built-in memory can be copied to the external flash memory card. Copying to the memory card does not delete originals in the built-in memory.

PRECHECK!

- Set the appropriate storage media. (Insert a memory card.) ➥page 30
- Press the **Mode** button to select the Play mode. ➥page 19

1. Select the Video or Photo thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
2. Press the **MENU** button → **Control** button (◀ / ▶) → **"Copy."**
3. Select an option by pressing the **Control** button (▲ / ▼) and then press the **OK** button.
4. If you choose Selected Files, a pop-up selection menu appears. Move to an item you want to copy usign the **Control** buttons (◀ / ▶), and then press the **OK** button to select it.
5. Repeat Step 4 for each item you want to copy.
6. Press the **MENU** button to copy the items you selected. The items are copied to another storage medium.





Submenu items

- **Select Files:** Copies the individual videos or photos. To copy individual videos or photos, select the desired videos or photos by pressing the **OK** button. The indicator ( ) is displayed on the selected videos or photos. Then press the **MENU** button to confirm. Pressing the **OK** button toggles selection and release.
- **All Files:** Copies all the videos or photos.

Note that removing the battery pack or disconnecting the AC power adaptor while you copy files may damage the storage media.

- If a memory card is not inserted, you cannot perform the **"Copy"** function.
- You can not copy a file if the memory card has insufficient free space. Remove unnecessary files before proceeding. ➥page 60
- The total size of the files you copy must be less than the free space on the memory card. If the size of the files that you want to copy is larger than the free space, you will see an error message.
- Copied videos or photos have no delete protection even if the original has protection.
- Copying may take some time depending on the number of files and file size.
- Copying may not operate if the battery charge is insufficient. If available, use the AC adaptor while copying to ensure continuous power.

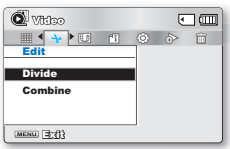
Divide

You can divide a video clip as many times as you want in order to delete a section you no longer need. The videos will be divided in groups of two.

PRECHECK!

Press the **Mode** button to select the Play mode. ➥page 19

1. Select the Video thumbnail index view screen.
   - You can between video and photo thumbnail view using the zoom lever.
2. Press the **MENU** button →**Control** button (▲ /▼ /◀ / ▶/OK) → **"Edit" → "Divide."**
3. Select a desired video clip using the **Control** button (▲ /▼ /◀ / ▶/OK).
   - The selected video clip is paused.
4. Search the point of division by pressing the **Control** button (◀/ ▶/OK).
5. Press the **MENU** button to pause at the point of division.
   - A message appears asking for your confirmation.
6. Select **"Yes."**
   - If you want to delete an unwanted section of a video clip, divide the video first, and then delete the image (section) you no longer need. After dividing the video clip, you can also combine other desired videos. ➥page 66
   - The second part of the divided video is displayed at the end of the thumbnail index.



Example: You can divide a video clip into two in order to delete a section you no longer need.

1. Before dividing

0~60 seconds

2. After video is divided at 30 second point.

0~30 seconds

31~60 seconds

3. After deleting first video.

0~30 seconds

- The video clip is divided into two videos.

- **The Divide function is not available under the following conditions:**
  - If the total recorded time of the video is less than 6 seconds.
  - If you try to divide sections without leaving 3 seconds at the beginning and the end.
  - If the video file was recorded in the Time Lapse REC mode.
  - If the remaining section of the storage media space is less than 40MB.
  - If the video was recorded or edited by other devices.
- You cannot delete a protected image. You must first release the protect function to delete it. ➥page 61
- The division point may drift before or after the designated point by approximately 0.5 seconds.
- When the divide function is operating, the **Control** button (◀/ ▶) FF/REW/F.ADV/Slow functions can be used at the same time in single view.

Combine

You can combine two different videos.

PRECHECK!

Press the **Mode** button to select the Play mode. ➥page 19

1. Select the Video thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
2. Press the **MENU** button → **Control** button (▲ /▼ /◀ / ▶/OK) → **"Edit"** → **"Combine."**
3. Move to the first video clip you want to combine using the **Control** button (▲ /▼ / ◀ / ▶/OK).
4. Press **OK** to select the clip. The (✓) indicator is displayed on the selected video clip.
   - Pressing the **OK** button toggles between selected and released.
5. Repeat Steps 3 and 4 for the second video you want to combine into this single clip.
6. Press the **MENU** button.
   - A message appears asking for your confirmation.
7. Select **"Yes."**
   - The two video clips you selected are combined in the order you selected them and restored as one video clip.
   - The thumbnail of the first video clip appears as the thumbnail for the combined video.

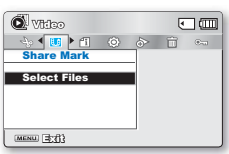
- **The combine function is not available in the following conditions:**
  - If the videos have different resolution formats. Videos with different resolution formats cannot be combined (TV super fine/TV fine /TV normal vs. Web fine/Web normal.)
  - If the videos are in different aspect ratios. (4:3 vs 16:9 wide)
  - If one file is a Time Lapse REC mode recording and the other is normally recorded file.
  - If the total size of the two files to be combined exceeds 1.8GB
  - If the remaining section of the storage media space is less than 40MB.
  - A maximum of 2 videos can be combined at a time.
  - If you combine videos having the same resolution but different qualities, the combined video will have the lower image quality for playback. For example, if you combine a video clip of **"TV Super Fine"** with another video clip of **"TV Fine"**, which has the same resolution, then the combined video will be in **"TV Fine"** resolution and quality.
  - If the video was recorded or edited by other devices.
- You cannot combine protected videos. You must remove protection from a video before you can combine it. ➥page 61
- The original videos will not be preserved.
- When the combine function is operating, the **Control** button (◀/ ▶) FF/REW/F.ADV/Slow functions can be used at the same time in single view.
- This function is available only in the thumbnail index view screen.

Share Mark

You can set the Share mark on a video thumbnail image. Then you can directly upload the marked file to the YouTube site.

PRECHECK!

Press the **Mode** button to select the Play mode. ➥page 19



1. Select the Video thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
2. Press the **MENU** button → **Control** button (◀ / ▶) → **"Share Mark"** → **"Select Files."**
3. Use the **Control** button (▲ /▼/◀ / ▶) to move to a desired video, and then press the **OK** button.
   - The Share mark indicator is displayed on the selected video.
   - You can also check the Share mark on the video image by pressing **Share** button.
4. Repeat Step 3 for each video you want to mark.
5. Press the **MENU** button.
   - A message appears asking for your confirmation.
6. Select **"Yes."**

By using the software Intelli-studio embedded in the camcorder, you can easily upload videos marked with Share marks. ➥page 89

playback options

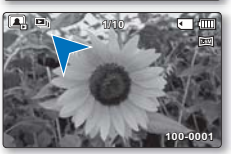
Slide Show

You can playback all the photos stored in the storage media automatically.

PRECHECK!

Press the **Mode** button to select the Play mode. ➥page 19

1. Select the Photo thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
2. Press the **MENU** button → **Control** button (◀ / ▶) → **"Slide Show"** → **"Start."**
3. Press the **OK** button.
   - The ( ) indicator is displayed. The Slide Show will start from the current image.
   - The Slide Show will start at an interval of 2~3 seconds.
   - To end the slide show, press the **OK** button again.



- 4 background music files are stored in the camcorder by default. When a slide show begins, it plays the background music files in a random order.
- You can adjust the background music's volume level using the **Control** button (▲ / ▼).
- Slide show starts even when there is only 1 photo image.

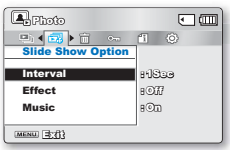
Slide Show Option

You can enjoy a slide show with various effects.

PRECHECK!

Press the **Mode** button to select the Play mode. ➥page 19

1. Select the Photo thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
2. Press the **MENU** button → **Control** button (◀ / ▶) → **"Slide Show Option."**
3. Select an option by pressing the **Control** button (▲ /▼ / ◀ / ▶), and then press the **OK** button.
4. The Slide Show will start using the effect you selected.
   - To end the slide show, press the **OK** button again.



Submenu items

- **Interval:** Set the slideshow's image transition interval. (1 sec or 3 sec)
- **Effect:** If the **"Effect"** is set to **"On"**, the slideshow displays images consecutively.
- **Music:** If the **"Music"** is set to **"On"**, the slideshow will play back with background music. (The background music is selected randomly from 4 sample music files stored.)

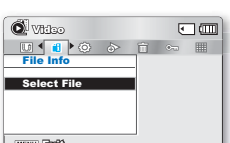
File Info

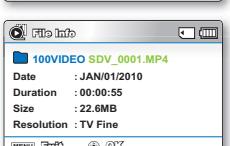
You can see the image information for all images.

PRECHECK!

Press the **Mode** button to select the Play mode. ➥page 19

1. Select the Video or Photo thumbnail index view screen.
   - You can switch between video and photo thumbnail view using the zoom lever.
2. Press the **MENU** button → **Control** button (◀ / ▶) → **"File Info" → "Select File."**
3. Use the **Control** button (▲ /▼/◀ / ▶) to select the desired video or photo, and then press the **OK** button.
   - The information of the selected file is displayed as shown below:
     - Date
     - Duration
     - Size
     - Resolution
   - Press the **MENU** button again after confirming.

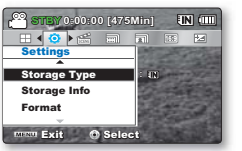


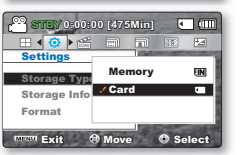


CHANGING THE MENU SETTINGS IN "SETTINGS"

You can setup the date/time, OSD language, and display settings of the camcorder.

1. Press **MENU** button.
   - The menu screen appears.
2. Press the **Control** button (◀ / ▶) to select **"Settings."**
   - The menus in **"Settings"** mode will appear.
3. Select the desired submenu and menu item with the **Control** buttons (▲ / ▼ / ◀ / ▶), and then press the **OK** button.
   - To return to the normal screen, press the **MENU** button.
   - Depending on the mode you've selected, not all items will be accessible.
     (If there is no storage media inserted, it can not be selected and will be dimmed in the menu: **"Storage Type (SMX-C24 only)", "Storage Info", "Format"**, etc.)





- The pop-up selection menu will appear depending on the selected menu item. In this case, select the desired item with the **Control** buttons (◀ / ▶) and the **OK** button.
- Before selecting a menu item, set the appropriate operation mode first. ➥page 19

SETTINGS MENU ITEMS ( )

● : Accessible
× : Not accessible

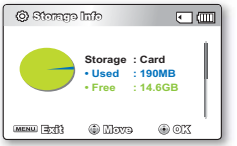
Items	Record (/) mode	Play mode (Thumbnail index screen)		Default values	Page
		Video ( )	Photo ( )		
Storage Type (SMX-C24 only)	●	●		Memory	30
Storage Info	●	●		-	72
Format	●	●		-	73
File No.	●	●		Series	73
Time Zone	●	●		Home	74
Date/Time Set	●	●		-	28
Date Type	●	●		JAN/01/2010	75
Time Type	●	●		12Hr	76
Date/Time Display	●	●		Off	76
LCD Brightness	●	×		0	77
LCD Color	●	×		-	77
LCD Enhancer	●	●		Off	78
Auto LCD Off *	●	×		On	78
Menu Design	●	●		Misty White	79
Transparency	●	×		0%	79
Beep Sound	●	●		On	80
Shutter Sound	●	●		On	80
Auto Power Off *	●	●		5 Min	81
PC Software	●	●		On	81
TV Display	●	×		On	82
Default Set	●	●		-	82
Version	●	●		-	83
Language	●	●		English	29
Demo	●	×		On	83

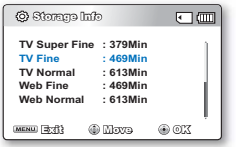
- These Items and default values may be changed without notice.
- There are some functions you cannot activate simultaneously in the menu. ➥page 108
  You cannot select the dimmed menu items.
- Items marked with * are available only when the camcorder is supplied the power using the battery pack.

Storage Info

Displays the storage information. You can view the storage media, used memory space, and available memory space.

1. Press the **Control** button (▲ / ▼) → **"Storage Info"** → **OK** button.
2. Used memory space, available memory space for use, and the recordable time depending on the selected video resolution appears.
3. Press the **MENU** button to exit the menu.





Submenu items

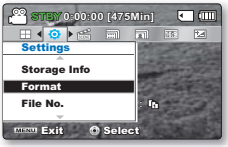
- **Memory:** Displays the memory information of the built-in storage media. (SMX-C24 only)
- **Card:** Displays the memory information of the inserted memory card.

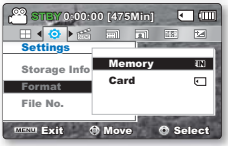
- If there is no storage media inserted, it cannot be selected and will be dimmed on the menu.
- In the Storage Info display, you can check the used and available memory as well as the remaining recording time for each recording resolution. For the desired information, scroll the screen using the **Control** (▲ / ▼) button.
- Actual memory capacity may be less than that of displayed on the screen as its firmware uses a portion of the memory.

Format

Use this function if you want to delete all files completely or to correct problems on the storage media.

1. Press the **Control** button (▲ / ▼) → **"Format"** → **OK** button.
   - A message appears asking about formatting the memory card.
2. Select **"Yes."**
   - The format is executed with a message.
3. Press the **MENU** button to exit the menu.





Submenu items

- **Memory:** Formats the built-in storage media. (SMX-C24 only)
- **Card:** Formats the memory card.

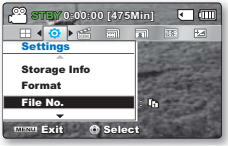
- Do not remove the recording medium or perform any other operation (such as turning off the power) during formatting. Also, be sure to use the provided AC adapter, as the recording medium may be corrupted if the battery becomes exhausted during formatting.
- If the recording medium becomes corrupted, format it again.

- **Do not format the storage media on a PC or other device.**
  Make sure to format the storage media on this camcorder.
- Format the memory card in the following cases:
  - If the memory card is new and has never been used.
  - If the memory card has been formatted by or recorded on by other devices
  - If this camcorder cannot read the memory card
- A memory card with the protection tab set to lock can not be formatted.
- If there is no storage media inserted, it can not be selected and it will be dimmed on the menu.

File No.

File numbers are assigned to recorded files in the order they were recorded.

1. Press the **Control** button (▲ / ▼) → **"File No."** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



Submenu items

- **Series:** Assigns file numbers in sequence even after you've replaced the memory card with another one, formatted the card, or deleted all files. The file number is reset when a new folder is created.
- **Reset:** Resets the file number to 0001 even after you've formatted the card, deleted all the files, or inserted a new memory card.

- When you set **"File No."** to **"Series"**, each file is assigned a different number to avoid duplicating file names. This is convenient when you want to manage your files on a PC.
- For the detailed information about the structure of folders and files, see page 93.

Time Zone

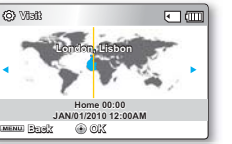
You can easily set the clock to the local time when using your camcorder while travelling.

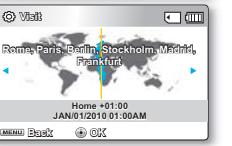
Submenu items

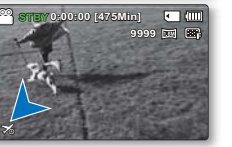
- **Home:** The clock will be used according to your setting on the **"Date/Time Set"** menu. Select it when using this camcorder for the first time or when returning the clock to your hometown date/time setting.
- **Visit ( ):** When you visit a different time zone, it allows you to use the local time without changing your hometown time setting. The clock will be adjusted in accordance with the time difference between the two locations.

Setting the clock to the local time ("Visit")

1. Press the **Control** button (▲ / ▼) → **"Time Zone"** → **OK** button.
   - The Time Zone screen will be displayed.
2. Select **"Visit"** with the **Control** button (▲/▼/OK) , and then select the area you are visiting using the **Control** button (◀ / ▶).
   - You can check the time difference between **"Home"** and **"Visit."**
3. Press the **OK** button to confirm.
   - The clock is set to the time zone of the place you are visiting.
4. Press the **MENU** button to exit the menu.
   - When **"Time Zone : Visit"** is set, the icon ( ) will be displayed next to the date and time display. ➥page 76







Cities used to set the time zone

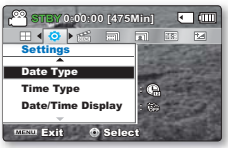
Cities	Time zone	Cities	Time zone
London, Lisbon	+00:00	Adelaide	+09:30
Rome, Paris, Berlin, Stockholm, Madrid, Frankfurt	+01:00	Guam, Sydney, Brisbane	+10:00
Athens, Helsinki, Cairo, Ankara	+02:00	Solomon Islands	+11:00
Moskva, Riyadh	+03:00	Wellington, Fiji	+12:00
Teheran	+03:30	Samoa, Midway	-11:00
Abu Dhabi, Muscat	+04:00	Honolulu, Hawaii, Tahiti	-10:00
Kabul	+04:30	Alaska	-09:00
Tashkent, Karachi	+05:00	LA, San Francisco, Vancouver, Seattle	-08:00
Calcutta, New Delhi	+05:30	Denver, Phoenix, Salt Lake City	-07:00
Kathmandu	+05:45	Chicago, Dallas, Houston, Mexico City	-06:00
Almaty, Dacca	+06:00	New York, Miami, Washington D.C., Montreal, Atlanta	-05:00
Yangon	+06:30	Caracas, Santiago	-04:00
Bangkok	+07:00	Buenos Aires, Brasilia, Sao Paulo	-03:00
Hong Kong, Beijing, Taipei, Singapore, Manila	+08:00	Fernando de Noronha	-02:00
Seoul, Tokyo, Pyongyang	+09:00	Azores, Cape Verde	-01:00

- You can set the date and time in **"Date/Time Set"** from the **"Settings"** menu. ➥page 28
- The times are based on Greenwich Mean Time (GMT).

Date Type

You can select the desired date type.

1. Press the **Control** button (▲ / ▼) → **"Date Type"** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



Submenu items

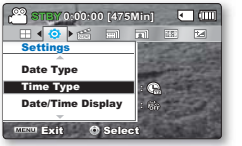
- **2010/01/01:** Displays the date in the order of year, month (two-digit) and day.
- **JAN/01/2010 :** Displays the date in the order of month, day and year.
- **01/JAN/2010 :** Displays the date in the order of day, month and year.
- **01/01/2010:** Displays the date in the order of day, month (two-digit) and year.

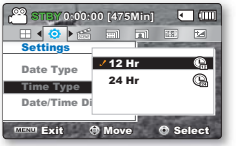
This function depends on the **"Date/Time Display"** setting.

Time Type

You can select the time format to display.

1. Press the **Control** button (▲ / ▼) → **"Time Type"** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.





Submenu items

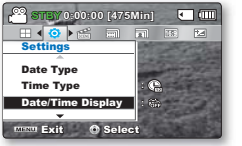
- **12 Hr:** The time is displayed in 12 hour units.
- **24 Hr:** The time is displayed in 24 hour units.

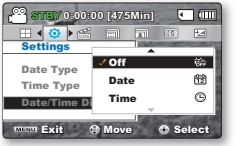
This function depends on the **"Date/Time Display"** setting.

Date/Time Display

You can set the date and time to display on the LCD screen. Before you use the **"Date/Time Display"** function, you must set the date and time. ➥page 28

1. Press the **Control** button (▲ / ▼) → **"Date/Time Display"** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.
   - The date/time is displayed on the LCD screen according to the selected option.





Submenu items

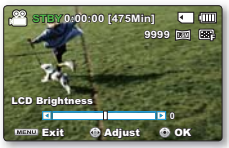
- **Off:** Current date and time information is not displayed.
- **Date:** Displays the current date.
- **Time:** Displays the current time.
- **Date & Time:** Displays the current date and time.

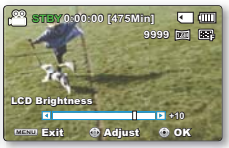
- The date/time will read **"JAN/01/2010 12:00 AM"** under the following condition:
  - The built-in rechargeable battery becomes weak or dead.
- This function depends on the **"Date Type"** and **"Time Type"** setting.

LCD Brightness

You can adjust the brightness of the LCD screen to compensate for ambient lighting conditions.

1. Press the **Control** button (▲ / ▼) → **"LCD Brightness" → OK** button.
2. Press the **Control** button (◀ / ▶) to adjust the value of the desired item.
   - Pressing the **Control** button (▶) will brighten the screen. Pressing the **Control** button (◀) will darken the screen.
3. Press the **MENU** button to exit the menu.



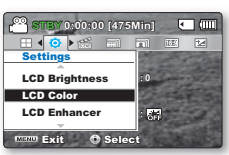


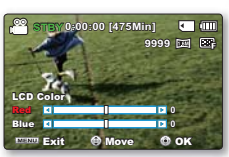
- A brighter LCD screen setting consumes more battery power.
- If you adjust the LCD brightness when the ambient lighting is too bright, it is hard to see the monitor indoors.
- LCD Brightness does not affect the brightness of images the camcorder records.
- You can adjust the LCD Brightness from -15 to 15.

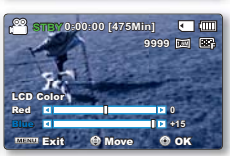
LCD Color

- You can change the color of the screen by adjusting the red and blue color ratio.
- When you set the red and blue color values, the higher the values, the brighter the LCD screen.

1. Press the **Control** button (▲ / ▼) → **"LCD Color" → OK** button.
2. Press the **Control** button (◀ / ▶) to adjust the value of the desired item.
   - You can adjust the LCD color (red/blue) from -15 to 15, using the **Control** button (▲ / ▼ / ◀ / ▶ / OK).
3. Press the **MENU** button to exit the menu.





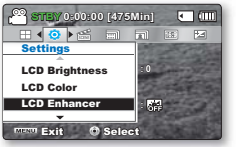


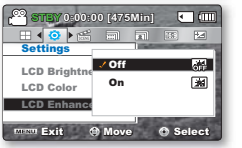
- You can manipulate the color displayed on the LCD screen by adjusting the color ratio of red and blue.
- Adjusting the color display of the LCD screen does not affect the images the camcorder records.
- Higher blue or red values produce a brighter LCD screen.

LCD Enhancer

Contrast is enhanced for a clear and bright image. This effect is also implemented outdoors in bright daylight.

1. Press the **Control** button (▲ / ▼) → **"LCD Enhancer"** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.





Submenu items

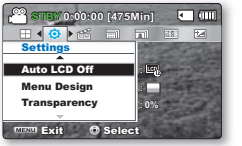
- **Off:** Disables the function
- **On ( ):** LCD Enhancer operates.

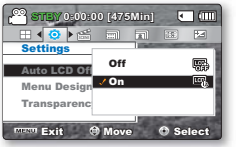
- LCD Enhancer function does not affect the quality of the image being recorded.
- When the LCD Enhancer works at low illumination, some stripes may occur on the LCD screen. This is not a malfunction.
- Using the LCD Enhancer function may cause color to look different on the display.

Auto LCD Off

To reduce power consumption, the brightness of the LCD screen is automatically dimmed if the camcorder is idle for more than 2 minutes.

1. Press the **Control** button (▲ / ▼) → **"Auto LCD Off"** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.





Submenu items

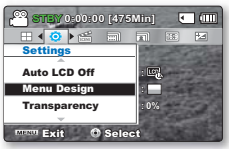
- **Off:** Disables the function
- **On:** When the camcorder is idle for more than 2 minutes in Video or Photo STBY mode, or for more than 5 minutes when recording a video, the power saving mode starts by dimming the LCD screen.

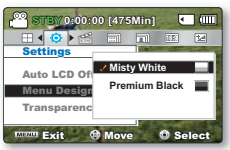
- When the **"Auto LCD Off"** function is enabled, you can press any button on the camcorder to return LCD brightness to normal.
- **Auto LCD Off will be disabled in the following cases:**
  - If the DC power cable (AC power adaptor, USB cable) is connected.

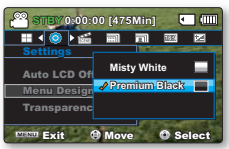
Menu Design

You can select the desired menu color to display the menu.

1. Press the **Control** button (▲ / ▼) → **"Menu Design"** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼), → **OK** button.
   - **"Misty White"** → **"Premium Black"**
3. Press the **MENU** button to exit the menu.







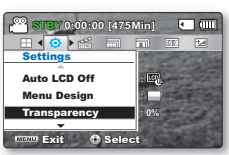
Transparency

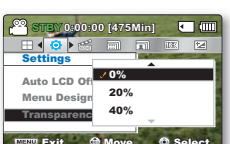
You can select the transparency at which the camcorder displays the Record menu.

1. Press the **Control** button (▲ / ▼) → **"Transparency"** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
   - The transparency of the menu screen is changed to the selected value.
   - The bigger the value, the more transparent the screen is.
3. Press the **MENU** button to exit the menu.

Submenu items

"0%" → "20% " → "40%" → "60%"





<Transparency 0%>

<Transparency 60%>

The setting value is applied to the menu screen of Record mode only.

settings options

Beep Sound

You can set the menu button beep sound on or off.

1. Press the **Control** button (▲ / ▼) → **"Beep Sound"** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.

Submenu items

- **Off:** Disables the function.
- **On:** When on, a beep sounds every time a button is pressed.

The Beep sound function is canceled in the following cases:
- During recording, playing
- When the camcorder has a cable connection. (AV cable)

Shutter Sound

You can turn the shutter sound on or off.

1. Press the **Control** button (▲ / ▼) → **"Shutter Sound"** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.

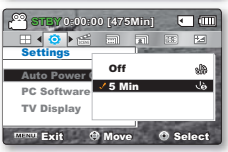
Submenu items

- **Off:** Disables the function.
- **On:** When on, the shutter sounds each time you press the **Photo** button.

Auto Power Off

To save battery power, you can set the **"Auto Power Off"** function which turns off the camcorder if there is no operation for a certain period of time.

1. Press the **Control** button (▲ / ▼) → **"Auto Power Off"** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



Submenu items

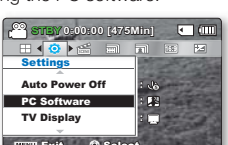
- **Off:** The camcorder does not turn off automatically.
- **5 Min:** For power saving purpose, the camcorder automatically turns off if there is no operation for 5 minutes. Functions only in STBY mode or in thumbnail index view.

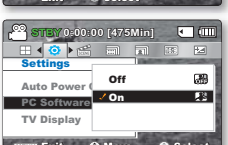
- **Auto Power Off is disabled in the following instances:**
  - If the DC power cable (AC power adaptor, USB cable) is connected
  - While the **"Demo"** menu is running
  - During recording, playing (Pause excluded), or a slideshow
- Press the **Power** button to restart the camcorder.

PC Software

If you set PC Software on, you can use the built-in PC software by connecting the USB cable between the camcorder and your PC. You can download the videos and photos stored on the camcorder to your PC's hard disk. You can also edit the video and photo files on your camcorder using the PC software.

1. Press the **Control** button (▲ / ▼) → **"PC Software"** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.





Submenu items

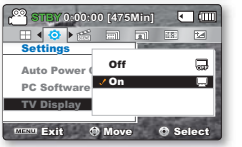
- **Off:** Disables the function
- **On:** You can use the built-in PC software by connecting the USB cable between the camcorder and your PC.

The PC Software is compatible with the Windows OS only.

TV Display

You can select the output path of the OSD (On Screen Display).

1. Press the **Control** button (▲ / ▼) → **"TV Display"** → **OK** button.
2. Select the desired submenu item with the **Control** button (▲ / ▼) → **OK** button.
3. Press the **MENU** button to exit the menu.



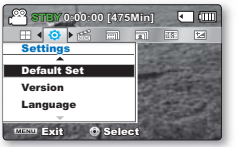
Submenu items

- **Off:** The OSD appears in the LCD screen only.
- **On:** The OSD appears in the LCD screen and TV. (Connecting to a TV ➥page 94).

Default Set

You can return your camcorder settings to the factory defaults (initial settings at the factory). Initializing the camcorder settings to factory defaults does not affect recorded images.

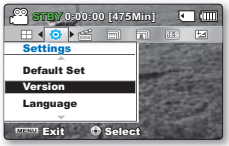
1. Press the **Control** button (▲ / ▼) → **"Default Set"** → **OK** button.
2. Press the **"Yes"**, if you want all the settings return to the default.
   - The Time Zone screen appears after all settings return to the default.
3. Set the **"Date/Time Set"** again. ➥page 28

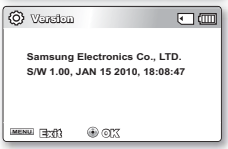


- Do not turn off the power while using this function.
- Returning the camcorder settings to factory defaults does not affect recorded images.

Version

The version information can be changed without the prior notice.



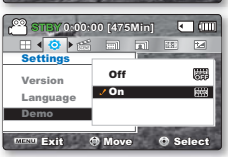


1. Press the **Control** button (▲ / ▼) → **"Version"** → **OK** button.
   - The version information displayed on the LCD screen.
2. Press the **MENU** button to exit the menu.

For enhanced performance, the version information can be changed without prior notice.

Demo

Demonstration automatically shows you the major features of your camcorder so that you can use them more easily.



1. Press the **Control** button (▲ / ▼/OK) → **"Demo"** → **"On."**
   - If you don't want this function, select **"Off."**
2. Press the **MENU** button to exit the menu.
   - The Demo function starts on the LCD screen.

Submenu items

- **Off:** Disables the function.
- **On:** Activates demonstration mode and shows various features on the LCD screen.

The Demo mode is cancelled in the following case:

- If any button is pushed. (**Recording start/stop, Photo, SMART AUTO**, etc.) However, if Demo mode is set to On, the camcorder will will enter Demo mode automatically if it is in STBY mode and idle for 5 minutes without operation. If you don't want the Demo function to start, set **"Demo"** to **"Off"**.

Using the Shop Mode

- In STBY mode, holding the **MENU** button for 5 seconds activates Demonstration mode which starts a demo immediately without your setting **"Demo: on."**

The Demo function does not operate in the following cases:

- If **"Auto Power Off"** is set to **"5 Min"** (uses the battery as main power), the Auto Power Off function will turn the camcorder off before Demo can run.

CHECKING YOUR COMPUTER TYPE

This chapter explains how to connect the camcorder to a computer using the USB cable.

Check your computer type before using!!!

To view your recordings on a computer, you need to check your computer type first. Then, take the steps below according to your computer type.

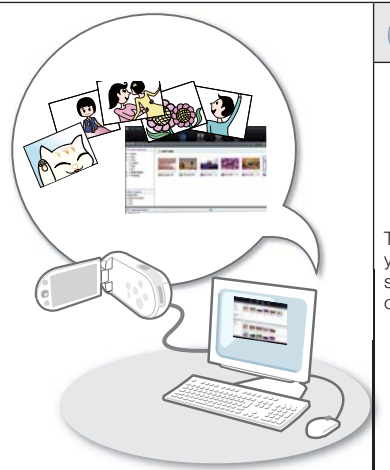
Using with Windows

Connect your camcorder to the computer using the USB cable.

- The built-in editing software Intelli-studio runs on the PC automatically once the camcorder is connected to a Windows computer. (When you specify **"PC Software: On"**). ➥page 81

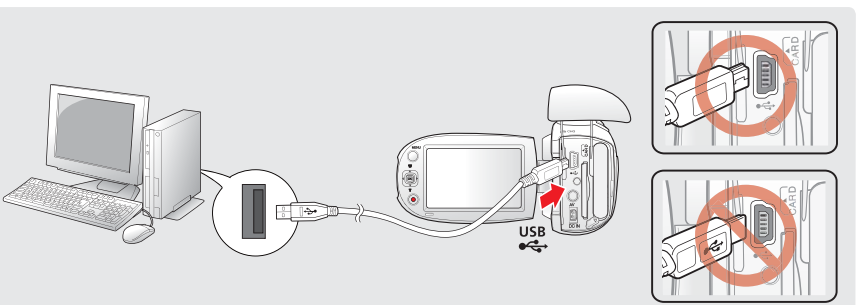
Play back or edit your recordings on the computer using the built-in Intelli-studio application. ➥page 88

You can also upload your recordings to YouTube or other websites using Intelli-studio. ➥page 89



Using with Macintosh

The built-in software on your camcorder, 'Intelli-studio', is not Macintosh compliant.



WHAT YOU CAN DO WITH A WINDOWS COMPUTER

You can enjoy the following operations by connecting your camcorder to your Windows computer using a USB cable.

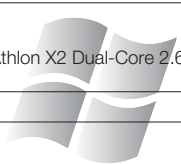
Main Functions

- By using 'Intelli-studio', the editing software built into your camcorder, you can enjoy the following operations:
  - Playing back recorded videos or photos. ➥page 88
  - Editing recorded videos or photos. ➥page 88
  - Uploading the recorded videos and photos to YouTube or Flickr or Facebook, etc. ➥page 89
- You can transfer or copy the video and photo files saved on the storage media to your computer. (Mass storage function) ➥page 92

System Requirements

The following requirements must be met to use the built-in editing software (Intelli-studio):

Items	System Requirements
OS (Operating System)	Windows XP/Vista/Windows 7
CPU	Intel® Pentium®4 3.0 GHz or higher AMD Athlon™ FX 2.2 GHz or higher (Notebook: Intel Core2 Duo 2.2GHz or AMD Athlon X2 Dual-Core 2.6GHz or higher recommended)
RAM	1GB or higher is recommended
Video Card	nVIDIA Geforce 7600GT or higher ATI X1600 series or higher
Display	1024 x 768, 16-bit color or higher (1280 x 1024, 32-bit color recommended)
USB	USB 2.0 support
Direct X	DirectX 9.0 or higher

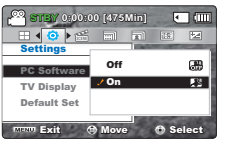


- System requirements listed above are minimum requirements. Even on a system that meets the requirements, Intelli-studio may not operate optimally.
- On a slower than recommended computer, video playback may skip frames or operate erratically.
- If the version of DirectX on your computer is lower than 9.0, install DirectX 9.0 or higher.
- We recommend you transfer recorded videos to a PC before playing back or editing the videos.
- To run the functions above, a laptop computer requires higher system specifications than a desktop PC.

USING THE Intelli-studio PROGRAM

Using Intelli-studio, the built-in editing program in your camcorder, you can transfer video/photo files onto your PC and edit them on your computer. The Intelli-studio offers the most convenient way for you to manage video/photo files by using the simple USB cable connection between the camcorder and your PC.

Step 1. Connecting the USB cable



1. Set the menu setting to **"PC Software: On."** ➥page 81
   - The default menu settings are displayed in the graphic to the right.
   - If you have the SMX-C24, select the storage media (built-in or memory card) in the settings menu. ➥page 30
2. Connect the camcorder and the PC with the USB cable.
   - A new file saving screen appears with the Intelli-studio main window.
   - According to your computer type, the corresponding removable disk window appears.
3. Click **"Yes"** to start the uploading procedure. Click **"Yes"** to confirm.
   - If you do not want to save a new file, select **"No."**

Disconnecting the USB cable:

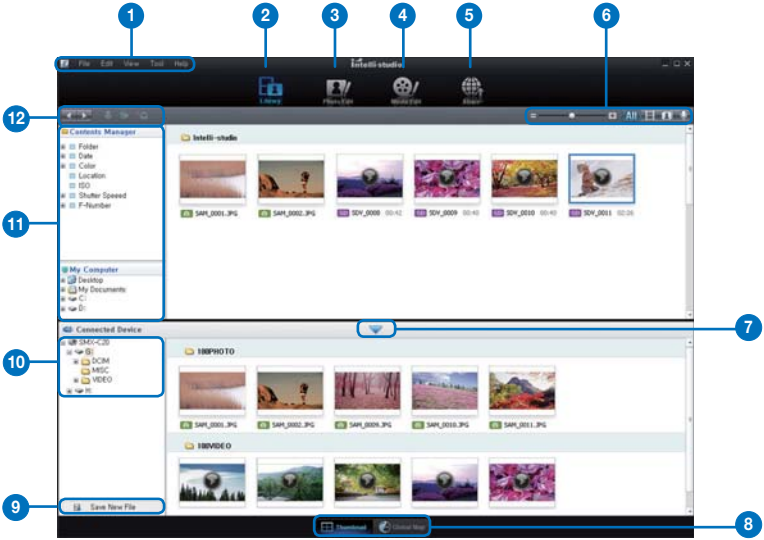
To disconnect the USB cable after completing the file transfer, you must follow these steps:

1. Click the “Safely Remove Hardware icon” icon on the taskbar.
2. Select “USB Mass Storage Device”, and then click “Stop.”
3. If the “Stop a Hardware device” window appears, click “OK.”
4. Disconnect the USB cable from the camcorder and PC.

- Use the provided USB cable.
- Don’t apply excessive force when inserting or extracting the USB cable into or from a USB jack.
- Insert the USB plug after confirming you are inserting it in the correct direction.
- We recommend using the AC power adaptor as power supply instead of the battery pack.
- When the USB cable is connected, turning the camcorder on or off may cause the PC to malfunction.
- If you disconnect the USB cable from the PC or the camcorder while transferring data, the data transfer will stop and the data may be damaged.
- If you connect the USB cable to a PC via a USB HUB or simultaneously connect the USB cable along with other USB devices, the camcorder may not work properly. If this occurs, remove all USB devices from the PC and reconnect the camcorder.
- Intelli-studio may not run automatically. If this occurs, access My Computer or Windows Explorer, open the drive that corresponds to your camcorder, and then run IStudio.exe.

Step 2. About the Intelli-studio main window

When the Intelli-studio starts up, thumbnails of videos and photos are displayed in the main window.



1. Menu items
2. Switches to Library of the PC and connected camcorder.
3. Switches to Photo Edit mode.
4. Switches to Movie Edit mode.
5. Switches to Share mode.
6. Changes the size of thumbnails.
   All : Displays all files (videos and photos).
   : Displays video files only.
   : Displays photo files only.
   : Displays voice files only.
7. Minimizes the Connected Device screen.
8. Displays videos and photos in various ways.
   Thumbnail: Displays video and photo thumbnails.
   Global Map: Displays the location of shooting place with a map.
9. Saves new files to PC.
10. Selects the Connected Device.
11. Shows directories of Contents Manager and My Computer.
    Contents Manager:You can classify and manage videos and photos on your computer.
    My Computer:You can view videos and photos saved in the selected directory of your PC.
12. Shortcut icons
    : Navigates files (previous and next).
    : Prints selected photo(s).
    : Views location of selected photo(s) with GPS information.
    : Register folders to "Contents Manager".

Intelli-studio is the common use program for SAMSUNG camcorder and digital camera models. Some functions may not operate properly depending on the product type.

Step 3. Playing back videos (or photos)

You can play back the recordings conveniently using the Intelli-studio application.

1. Run the Intelli-studio program. ➥page 86
2. Click the desired folder to display your recordings.
   - Video or photo thumbnails appear on the screen, according to the selected source.
3. Choose the video or photo that you want to play.
   - You can check the file information by moving the mouse pointer over the file.
   - Clicking a video thumbnail once will playback the video inside the thumbnail frame, allowing you to search for a desired video with ease.
4. Once you select the desired video (or photo), double-click to play back.

Intelli-studio supports the following file formats:
- Video formats: MP4 (Video: H.264, Audio: AAC), WMV (WMV 7/8/9)
- Photo formats: JPG, GIF, BMP, PNG, TIFF

Step 4. Editing videos (or photos)

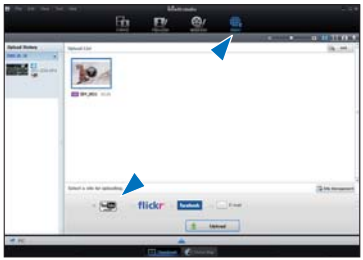
With Intelli-studio, you can edit videos or photos in various ways: Change Size, Fine-Tuning, Image Effect, Insert Frame, etc.

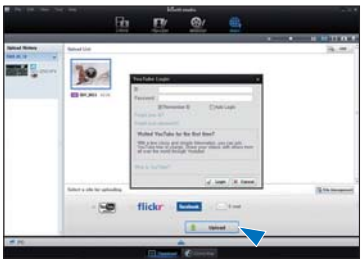
- When you edit a file using the Intelli-studio, we recommend using a copy of the file. Save a copy using My Computer before clicking on the **"Movie Edit** **"** or **"Photo Edit** **"** icon.

Step 5. Sharing the videos/photos online

Share your contents with the world by uploading photos and videos directly to a web site with on click.

1. Select the desired videos or photos to **"Share** ".
2. Click the **"Add** " and move the video or photo (drag and drop) to the sharing window for upload.
   - The selected file appears in the sharing window.
3. Click on the website you would like to upload files to.
   - You can choose **"YouTube** ", **"Flickr** " , **"Facebook** " or the website you specified for your uploading management.
4. Click **"Upload"** to start uploading.
   - A pop-up window appears asking for your ID and password.
5. Enter your ID and password to access.
   - Access to the web site contents can be limited depending on your web access environment.





- For more information about Intelli-studio use, see the Help Guide by clicking the **"Help"** → **"Help."**
- You can upload Share marked videos onto YouTube by pressing the **Share** button. ➥page 67

Installing Intelli-studio application on a Windows computer

- When you install Intelli-studio on your Windows computer so that it runs directly on your computer, it will run faster.
  It can also be updated automatically.
- Intelli-studio can be installed on a Windows Computer by clicking **"Tool"** → **"Install Intelli-studio on PC"** on the Intelli-studio screen.

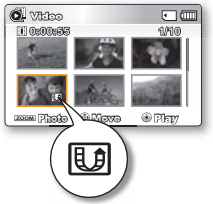
using with a Windows computer

Uploading your videos to YouTube directly

The One-Touch **Share** button lets you directly upload and share your videos on YouTube. Just press the **Share** button while your camcorder is connected to a Windows computer using the supplied USB cable. Then, you can share your recordings with your friends, family, or the world.

STEP 1

In the video thumbnail index view on your camcorder, set the Share mark on each recording you want to upload directly to YouTube by pressing the Share button.



1. Press the **Mode** button to select the Play mode.
   - If you have the SMX-C24, select the storage media (built-in or memory card). ➥page 30
2. Select the Video thumbnail index view screen using the zoom lever.
3. Use the **Control** button (▲ /▼ /◀ / ▶) to select the desired video.
4. Press the **Share** button to mark the video for upload.
5. The indicator is displayed on the selected video.
6. Repeat Steps 3 through 5 for each video you want to upload.

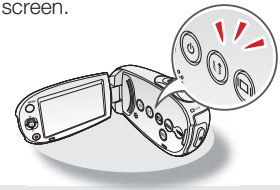
STEP 2

Set PC Software to On in the Settings Menu.
Connect the camcorder to a PC with the supplied USB cable. ➥page 86

- The Intelli-studio runs automatically after you connect the camcorder to a Windows computer (when you specify **"PC Software: On"** in PC Software in the Settings menu.)
- Intelli-studio may take some time to start. Also, it may start, but only appear as a button on the task bar. If this occurs, click the button.

STEP 3

While your camcorder is connected to the computer, press the Share button.



- Videos with the Share marks are displayed on the Sharing screen.
- Click "Yes" to start uploading.
- If you want to upload directly without showing a pop-up sharing window, check "Intelli-studio does not pop a list of share marked files in the connected device."

- Flickr is an image hosting website, web services suite, and online community platform. In addition to being a popular website for users to share personal photographs, the service is widely used by bloggers as a photo repository.
- **http://www.flickr.com/**

- Facebook is a global social networking website that is operated and privately owned by Facebook, Inc. Users can add friends and send messages, and update their personal profiles to notify friends about themselves. Additionally, users can join networks organized by city, workplace, school, and region.
- **http://www.facebook.com/**

- YouTube is a video sharing website. Users can upload, view, and share personalized video clips. The San Bruno-based service uses Adobe Flash technology to display a wide variety of users-generated contents including video clips, TV clips and music videos, as well as amateur contents such as video blogging and short orignal videos.
- **http://www.youtube.com/**

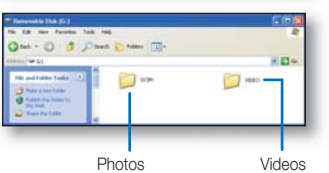
- When you upload to YouTube, your videos will be converted into a format playable by YouTube before uploading. Time spent uploading may vary depending on the user's upload conditions including computer and network performance.
- There is no guarantee that the uploading operation will work in all environments. Also note that server-side changes at YouTube in the future may disable this function.
- This product's YouTube uploading functionality is provided under the license from YouTube LLC. The presence of YouTube uploading functionality for this product does not constitute an endorsement or recommendation of the product by YouTube LLC.
- If you do not have an account at a specified website, you must register first before proceeding with any uploads.
- According to YouTube's policy, direct movie uploading may not be available in your nation / region.
- Video files can be uploaded onto the Youtube site only, and Flickr site only allows uploading photo files. Both video and photo files can be uploaded to the Facebook site.

TRANSFERRING VIDEOS/PHOTOS FROM THE CAMCORDER TO YOUR COMPUTER

You can transfer recorded data (video or photo) to a Windows computer by connecting the USB cable to the camcorder.

Viewing the contents of storage media (built-in memory or memory card)

1. Set **"PC Software"** to **"Off"**. ➥page 81
2. Check the storage media.
   - If you have the SMX-C24, select the storage media (built-in or memory card). ➥page 30
     (If you want to transfer from a memory card, you must insert the memory card first.)
3. Connect the camcorder to the PC with the USB cable. ➥page 86
   - The "Removable Disk" or "Samsung" window appears on the PC's screen after a moment.
   - The removable disk screen appears when you connect the camcorder to a USB device.
   - Select "Open folders to view files using Windows Explorer" and then click "OK."
4. The folders in the storage media appear.
   - Different file types are stored in different folders.
5. Save the desired files from the storage media to your PC.



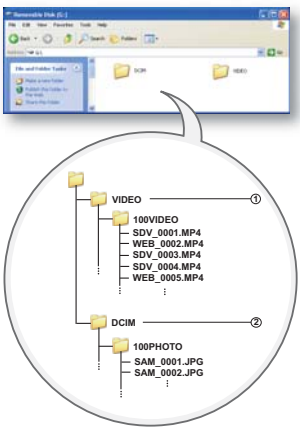
- If the "Removable Disk" window does not appear, confirm the connection (➥page 86) or repeat steps 1 and 3 again.
- If the removable disk does not appear automatically, open the removable disk folder in My Computer.
- If the connected camcorder's disk drive does not open or the context menu that appears when right-clicking your mouse (open or browse) appears broken, your computer is probably infected by an Autorun virus. We recommend you update your anti-virus software to its latest version.

The Structure of folders and files on the storage media

- The folder and file structure for storage media is as follows.
- Don't arbitrarily change or remove the folder or file name. It may not be playable.

Videos (H.264) ①

- The SD-quality videos (TV Super Fine, TV Fine, TV Normal) are named as "SDV_####.MP4".
- The Web videos (Web Fine, Web Normal) are named as "WEB_####.MP4".
- The file number automatically increases when a new video clip is created. Up to 9,999 files can be created in one folder.
- A new folder is created when files are created more than 9,999 files.



Photos ②

- As with videos, the file number automatically increases when a new image file is created.
- The maximum file number allowed is the same as for videos. A new folder stores files starting with SAM_0001.JPG.
- The folder name increases as follows: 100PHOTO → 101PHOTO etc.
- Up to 9,999 files can be created in one folder. A new folder is created when files are created more than 9,999 files.

Image format

Videos

- Videos are compressed in H.264 format. The file extension is ".MP4."
- Refer to page 46 for video resolution.

Photos

- Photos are compressed in JPEG (Joint Photographic Experts Group) format. The file extension is ".JPG."
- Refer to page 47 for photo resolution.

- When the 9,999th file is created in the 999th folder (i.e. file SDV_9999.MP4 is created in the 999th VIDEO folder), no more folders can be created. Backup your files to a PC and format the storage media, and then reset file numbering from the menu.
- The name of a movie file recorded by the camcorder should not be modified, because proper playback by the camcorder requires the original folder and file naming convention.

connecting to other devices

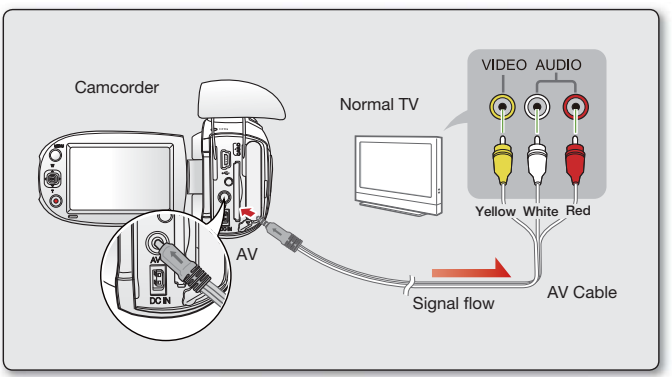
You can view the recorded videos and photos on a large screen by connecting the camcorder to a TV.

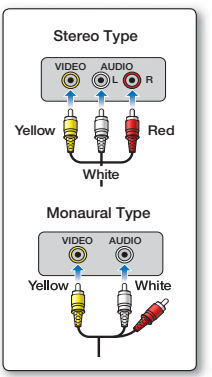
CONNECTING TO A TV

- To playback your recordings, the television must be NTSC-compatible. ➥page 99
- We recommend that you use the AC power adaptor as power source for the camcorder.

Use the provided Audio/Video cable to connect the camcorder to a TV as follows:

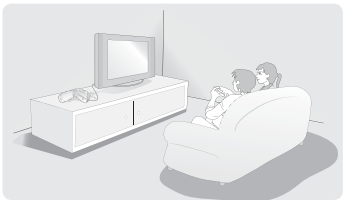
1. Connect the end of the Audio/Video cable with the single plug to the Audio/Video cable jack of the camcorder.
2. Connect the other end with video (yellow) and right (red)/left (white) audio cables to the TV.





- Make sure that the Audio/Video cable is connected to the TV and the camcorder. You cannot view the image or hear the sound if the cable is not connected properly.
- When you connect the Audio/Video cable, match the color of the Audio/Video cable jack and the TV terminals.
- Don't apply excessive force when inserting or extracting the cable into/from the Audio/Video cable.
- Use the AC power adaptor when connecting the cable to the TV.
- When the Audio/Video cable is connected to the camcorder, you should control the volume on the TV.
- The screen ratio of the TV and the camcorder may differ depending on the connected TV.

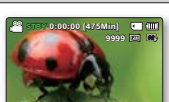
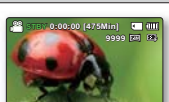
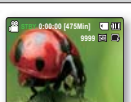
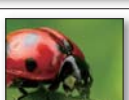
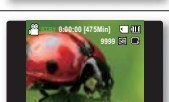
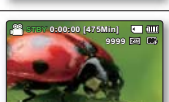
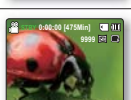
VIEWING ON A TV SCREEN



1. Turn on the TV and set the input selector to the Input connection the camcorder is connected to.
   - This is often referred to as "line." Refer to the TV instruction manual for how to switch the TV input.
2. Turn the camcorder on.
   - Press the **Mode** button to select the Play mode. ➥page 19
   - The image that the camcorder is displaying will appear on the TV screen.
   - You can also monitor the image on the LCD screen of the camcorder.
3. Play back the video.
   - You can playback, record, or set options in the menu while viewing on TV screen.

- When **"TV Display"** is set to **"Off "**, OSD (On-Screen-Display) does not appear on the TV screen. ➥page 82
- When the Audio/Video cable is connected to the camcorder, the built-in speaker will automatically turn off and you cannot adjust the volume bar.

Image display depending on TV screen aspect ratio

	Record (Video/Photo)	LCD	TV	
			16:9	4:3
16:9				
4:3				

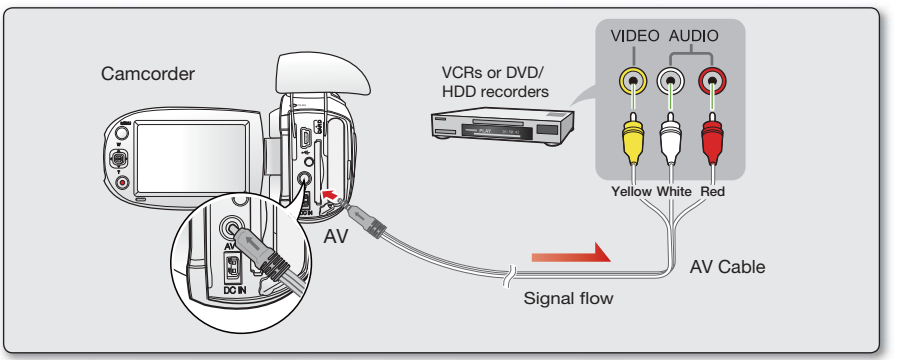
Refer to page 47 for the **"16:9 Wide"** setting.

RECORDING (DUBBING) IMAGES ON A VCR OR DVD/ HDD RECORDER

You can record (dub) images played back on this camcorder onto other video devices, such as VCRs or DVD/HDD recorders. Use the Audio/Video cable (provided) to connect the camcorder to another video device as shown in the following figure:

To connect

1. Open the LCD screen and the jack cover.
2. Connect the camcorder to the recorder.
   - Connect the provided Audio/video cable to the terminals of the external device matched to each cable color.



To copy

1. Choose the external input by pressing the input source button of the recording device.
   - Refer to the manual of the recording device.
2. Playback the selected video to be copied. ➥page 41
3. Start copying the video by pressing the record button of the recorder.
4. Press the stop recording button of the recorder to finish copying.

- Be sure to use the AC adaptor to power the camcorder from a household AC outlet to prevent battery power from shutting off during recording on another video device.
- Make sure to control the volume. Setting the volume too high may introduce noise to the recording video.
- When you connect the Audio/Video cable, match the color of the Audio/Video cable and the TV terminals.
- You can copy videos by watching the images on the camcorder if the VCRs or DVD/HDD recorders is connected to the TV. (You can connect the external device as the same way of connecting a VCRs or DVD/HDD recorders to the TV in home.)
- To prevent recording OSD (information) to be displayed along with the AV signal, set the **"TV Display"** to **"Off"** in Menu Settings. ➥page 82

MAINTENANCE

Your camcorder is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you fulfil any warranty obligations and allow you to enjoy this product for many years.

✪ For safekeeping of the camcorder, turn off the camcorder.
- Remove the battery pack and AC power adaptor. ➥page 15
- Remove the memory card. ➥page 31

Cautions on Storing

- **Do not leave the camcorder in a place where the temperature is very high for a long period of time:**
  The temperature inside a closed vehicle or trunk can become very high in a hot season. If you leave the camcorder in such a place, it could malfunction or the case could be damaged. Do not expose the camcorder to direct sunlight or place it near a heater.
- **Do not store the camcorder in a place where the humidity or dust level is high:**
  Dust entering the camcorder could cause malfunctions. If humidity is high, the lens could become moldy, and the camcorder could become inoperative. It is recommended that you put the camcorder in a box together with a desiccant when storing it in a closet, etc.
- **Do not store the camcorder in a place subject to strong magnetism or intense vibrations:**
  This could cause malfunctions.
- **Detach the battery pack from the camcorder and store it in a cool place:**
  Leaving the battery pack attached or storing it at high temperature could shorten its life.

Cleaning the camcorder

✪ **Before cleaning, turn off the camcorder and remove the battery pack and AC power adaptor.**

- **To clean the exterior**
  - Wipe gently with a soft dry cloth. Do not apply excessive force when cleaning, gently rub the surface.
  - Do not use benzene or thinner to clean the camcorder. The coating of exterior could peel off or the case could deteriorate.
- **To clean the LCD monitor**
  Wipe gently with a soft dry cloth. Be careful not to damage the monitor.
- **To clean the lens**
  Use an optional air blower to blow out dirt and other small objects. Do not wipe the lens with cloth or your fingers. If necessary, wipe gently with lens cleaning paper.
  - Mold may form if the lens is left dirty.
  - If the lens looks dimmer, turn off the camcorder and leave it for about 1 hour.

ADDITIONAL INFORMATION

Storage media

- **Be sure to follow the guidelines below to prevent corruption or damage of your recorded data.**
  - Do not bend or drop the storage media, or subject it to strong pressure, jolts or vibrations.
  - Do not splash the storage media with water.
  - Do not use, replace, or store the storage media in locations that are exposed to strong static electricity or electrical noise.
  - Do not turn off the camcorder power or remove the battery or AC power adaptor during recording, playback, or when otherwise accessing the storage media.
  - Do not bring the storage media near objects that have a strong magnetic field or that emit strong electromagnetic waves.
  - Do not store the storage media in locations with high temperature or high humidity.
  - Do not touch the metal parts.
- **Copy the recorded files to your PC. Samsung shall not be responsible for any lost data. (We recommend that you also copy the data from your PC to other media for backup storage.)**
- **Recorded contents may be lost due to a mistake when handling this camcorder or memory card, etc. Samsung shall not be responsible for compensation for damages due to the loss of recorded contents.**
- **Refer to pages 30-34 for details.**

LCD screen

- **To prevent damage to the LCD screen**
  - Do not push it too hard or knock it on anything.
  - Do not put the camcorder down with LCD screen facing down.
- **To prolong service life, avoid rubbing the camcorder with a coarse cloth.**
- **Be aware of the following phenomena arising from LCD screen use. They are not malfunctions.**
  - While using the camcorder, the surface around the LCD screen may heat up.
  - If you leave power on for a long time, the surface around the LCD screen becomes hot.

USING YOUR CAMCORDER ABROAD

- Each country or region has its own electric and color systems.
- Before using your camcorder abroad, check the following items.

Power sources

The provided AC adaptor features automatic voltage selection in the AC range from 100 V to 240 V. You can use your camcorder using the AC power adaptor supplied in any countries/regions within the AC 100 V to 240 V, 50/60 Hz range. Use a commercially available AC plug adaptor, if necessary, depending on the design of the wall outlet.

TV color systems

Your camcorder uses the NTSC TV system. If you want to view your recordings on a TV or copy recordings to an external device, the TV or device must be NTSC-compatible and have the appropriate Audio/Video jacks. Otherwise, you will need to use a separate video format transcoder (for example, a NTSC to PAL format converter) and the appropriate adapter cables.

The format transcoder is not provided by SAMSUNG.

NTSC-compatible countries/regions

Bahamas, Canada, Central America, Japan, Korea, Mexico, Philippines, Taiwan, United States of America, etc.

PAL-compatible countries/regions

Australia, Austria, Belgium, Bulgaria, China, CIS, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Great Britain, Holland, Hong Kong, Hungary, India, Iran, Iraq, Kuwait, Libya, Malaysia, Mauritius, Norway, Romania, Saudi Arabia, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Syria, Thailand, Tunisia, etc.

You can make recordings with your camcorder and view pictures on its LCD screen anywhere in the world.

TROUBLESHOOTING

✪ **Before contacting a Samsung authorized service center, perform the following simple checks. They may save you the time and expense of an unnecessary call.**

Warning indicators and messages

Power source

Message	Icon	Informs that...	Action
Low Battery	-	The battery pack is almost discharged.	• Change to a charged pack or use the AC power adaptor. Charge the battery pack.
Check the authenticity of this battery	-	The battery pack can not pass authenticity check.	• Check whether the battery is authentic. Change to an authentic battery. • We recommended you use only genuine Samsung batteries in this camcorder.

Storage media

Message	Icon	Informs that...	Action
Memory Full (SMX-C24 only)		There is not enough space to record in built-in memory.	• Delete unnecessary files in the built-in memory. Use a memory card. • Back-up files to your PC or another storage media and delete files.
Insert Card		There is no memory card inserted in the card slot.	• Insert a memory card.
Card Full		There is not enough space to record in the memory card.	• Delete unnecessary files from the memory card. Use the built-in memory. (SMX-C24 only) • Back-up files to your PC or another storage media and delete files. • Change to another memory card which has enough free space.
Card Locked		The write protection tab on an SDHC card has been set to lock.	• Release write protection tab.
Card Error		The memory card has some problem and cannot be recognized.	• Format the memory card or replace it with a new one.

Message	Icon	Informs that...	Action
Not Supported Card		The memory card is not supported in this camcorder.	• Change to a memory card that we recommended.
Not Supported Format		The memory card may have been formatted by another device and may still have existing images on it.	• The image format is not supported. Check the supported file format. • Format the memory card using menu item.
Please format		The memory card is not formatted.	• Format the memory card using menu item.
Low speed card. Please record at a lower resolution.	-	The memory card does not have enough speed to record at this resolution.	• Record video at a lower resolution. • Change memory card to a faster one. ➥page 31

Recording

Message	Icon	Informs that...	Action
Write Error	-	Some problems occurred when reading data from storage media.	• Format storage media using menus after backing-up important files to your PC or another storage media.
Release the Smart Auto	-	You cannot manually operate some functions when Smart Auto is activated.	• Release Smart Auto function.
Recovering Data… Don't power off and keep card inside.	-	The file was not created normally.	• Wait until data recovery is finished. • Never turn off the power or eject memory card during recovery or recording.
The number of video files is full. Cannot record video.	-	The number of video files that can be stored is 9,999 on 999th folder (999VIDEO).	• Delete unnecessary files from the memory card. • Back up files to your PC or another storage media and delete files. • Change to another card which has enough free space.
File number is full. Cannot record video.	-	Max video folder and file number has been reached and you cannot record.	• Format storage media using menu item after backing up important files to PC or another storage device. Set **"File No."** to **"Reset."**
File number is full. Cannot take a photo.	-	Max photo folder and file number has been reached and you cannot take a photo.	• Format storage media using menu item after backing up important files to PC or another storage device. Set **"File No."** to **"Reset."**
The number of photo files is full. Cannot take a photo.	-	The number of photo files has reached the 9,999 max.	• Delete unnecessary files on the memory card. • Back up files to your PC or another storage media and delete files. • Change to another card which has enough free space.

Playback

Message	Icon	Informs that...	Action
Total file size is over 1.8GB.	-	Total file size that can be combined is limited to 1.8GB.	• Combined files must be less than 1.8GB.
Select 2 files for combine.	-	You can not combine more than 2 different videos into one.	• It is possible to combine only 2 different videos into one.
Read Error	-	Some problems occurred during data read from storage media.	• Format storage media using menus after backing up important files to PC or another storage device.
Corrupted file	-	This file can not be read.	• Format the storage media using menus after back up important files to a PC or another storage device.

When there is condensation in or on your camcorder, put it aside for a while before using it.

- What is condensation?
  Condensation occurs when a camcorder is moved to a place where the temperature differs significantly from the previous place. The water vapour in the air turns into dew because of the temperature difference, and it condenses like dew on the external or internal lenses of the camcorder and on the reflection lens. When this happens, you should not use the record or play functions of the camcorder temporarily. You can cause a malfunction or damage the camcorder if you use it while there is condensation.
- What can I do?
  Turn the power off and detach the battery pack, and leave the camcorder in a dry area for 1~2 hours before using it.
- When does condensation occur most frequently?
  When you move the camcorder to a place with a higher temperature than the previous location, or when you move the camcorder into a hot area suddenly.
  - When you record outdoors in cold weather during the winter and then bring it in indoors.
  - When you record outdoors in hot weather after being indoors or inside a car where the air conditioner has been running.

Note before sending your camcorder for repair.

- If these instructions do not solve your problem, contact your nearest Samsung authorized service center.
- Depending on the problem, the current hard disk may need to be initialized or replaced and the data will be deleted. Be sure to back up the data on the hard disk or other storage media before sending your camcorder for repair. Samsung cannot guarantee against any loss of your data.

✪ **If you encounter any problems using your camcorder, check the following before asking for service repair. If these instructions do not solve your problem, contact the nearest Samsung authorized service center.**

Symptoms and solutions

Power

Symptom	Explanation/Solution
The camcorder does not turn on.	• The battery pack may not be inserted in your camcorder. Insert a battery pack into the camcorder. • The inserted battery pack may be discharged. Charge the battery pack or replace it with a charged one. • If you use an AC power adaptor, make sure it is properly connected to the wall outlet. • Remove the battery pack or unplug the AC power adaptor, and reconnect the power supply to the camcorder before turning it on.
The power automatically turns off.	• Is **"Auto Power Off"** set to **"5 Min"**? If no button is pressed for about 5 minutes, the camcorder is automatically turned off. To disable this option, change the setting of **"Auto Power Off"** to **"Off"** ➥page 81 • The battery pack is almost discharged. Charge the battery pack or replace it with a charged one. • Use the AC power adaptor.
Power cannot be turned off .	• Remove the battery pack or unplug the AC power adaptor, and reconnect the power supply to the camcorder before turning it on.
The battery pack is quickly discharged.	• The ambient, external temperature is too low. • The battery pack is not fully charged. Recharge the battery pack. • The battery pack has reached the end of its lifespan and cannot be recharged. Use another battery pack.

Displays

Symptom	Explanation/Solution
The Recorded Image is narrower or fatter than the original image.	• Make sure you set the correct video resolution before you record. ➥page 46
Unknown image appears on the LCD screen.	• The camcorder is in Demo mode. If you do not want to see Demo images, change the setting of **"Demo"** to **"Off."** ➥page 83
Unknown indicator appears on the screen.	• A warning indicator or message appears on the screen. ➥pages 100~102
An after image remains on the LCD screen.	• This occurs if you disconnect the AC power adaptor or remove the battery pack before turning the power off.
The image on the LCD screen looks dark.	• Ambient is too bright. Adjust the brightness and angle of the LCD. • Use the LCD Enhancer function.

Storage Media

Symptom	Explanation/Solution
Memory card functions are not operable.	• Insert a memory card into your camcorder properly. ➥page 31 • If you are using a memory card formatted on a computer, format it again directly on your camcorder. ➥page 73
Image cannot be deleted.	• You cannot delete the images protected by other devices. Release the protection of the image on the device. ➥page 61 • Release the lock on the write-protect tab of the memory card (SDHC memory card, etc.), if any. ➥page 32
You cannot format the memory card.	• Release the lock on the write-protect tab of the memory card (SDHC memory card, etc.), if any. ➥page 32 • Copy any important recorded files to your PC before formatting. Samsung shall not be responsible for any loss of data. (It is recommended that you copy the data to your PC or other storage media.)
The data file name is not indicated correctly.	• The file may be corrupted. • The file format is not supported by your camcorder. • Only the file name is displayed, if the directory structure does not comply with the international standard.

Recording

Symptom	Explanation/Solution
Pressing the **Recording start/stop** button does not start recording.	• There is not enough free space to record on the the storage media. • Check if memory card is not inserted or write-protect tab is set to lock. • The internal temperature of your camcorder is unusually high. Turn off your camcorder and leave it for a while in a cool place. • Your camcorder is damp and moist inside (condensation). Turn off your camcorder and leave it for about 1 hour in a cool place.
The actual recording time is less than the estimated time.	• The estimated recording time may vary depending on contents and features used. • Recording a fast-moving subject increases the bitrate and consequently the amount of storage space required for the recording, which can lead to a shorter available recording time.
The recording stops automatically.	• There is no more free space for recording on the storage media. Back up important files on your PC and format the storage media or delete the unnecessary files. • If you frequently record or delete files, the performance of the built-in flash memory will deteriorate. In this case, reformat the built-in memory. • If you use the memory card with low writing speed, the camcorder automatically stops recording the videos and the corresponding message appears on the LCD screen.

Recording

Symptom	Explanation/Solution
When recording a subject illuminated by bright light, vertical lines appear.	• The camcorder is unable to record these levels of brightness.
When the screen is exposed to direct sunlight during recording, the screen turns red or black for an instant.	• Do not leave the camcorder with the LCD screen exposed to direct sunlight.
The beep sound is not heard.	• Set the **"Beep Sound"** to **"On."** • The beep sound is temporally off while recording videos. • When the Audio/Video cable jack is connected to the camcorder, the beep sound will automatically turn off.
There is a time difference between the point where you press **Recording start/stop** button and the point where the recorded video starts/stops.	• On your camcorder, there may be a slight time delay between the point when you press **Recording start/stop** button and the actual point where the recorded video starts/stops. This is not an error.
The recording stops.	• The internal temperature of your camcorder is unusually high. Turn off your camcorder and leave it for a while in a cool place. • Your camcorder is damp and moist inside (condensation). Turn off your camcorder and leave it for about 1 hour in a cool place.
You cannot record a photo image.	• Set your camcorder to Record mode. ➥page 19 • Release the lock on the write-protection tab of the memory card if any. • The storage media is full. Use a new memory card or format the storage media. ➥page 73 Or remove unnecessary images. ➥page 60

Adjusting the image during recording

Symptom	Explanation/Solution
Focus does not adjust automatically.	• Set **"Focus"** to **"Auto."** ➥page 51 • The recording conditions are not suitable for auto focus. Adjust the focus manually. ➥page 51 • The lens is dusty on the surface. Clear the lens and check the focus. • Recording is being made in a dark place. Increase the brightness in the place.
The image appears too bright or flickering, or changes in color.	• This occurs when recording images under a fluorescent lamp, sodium lamp, or mercury lamp. Cancel **"iSCENE"** to minimize these phenomena. ➥page 45

Playback on your camcorder

Symptom	Explanation/Solution
Pressing the playback (Play/Pause) button will not start playing.	• Press the **Mode** button to set Video Play mode. • Image files recorded by other devices may not be played on your camcorder. • Check out the memory card compatibility. ➥page 32
The Skip or Search function does not work properly.	• If the temperature inside the camcorder is too high, it cannot function properly. Turn the camcorder off, wait for a few minutes, and then turn it on again.
Playback is interrupted unexpectedly.	• Confirm that the AC adaptor or battery pack is properly connected and stable.
You cannot hear the sound when playing video recorded by Time Lapse REC.	• The Time Lapse REC does not record sound. (mute recording) ➥page 56
Photos stored on a storage media are not displayed in the actual size.	• Photos recorded on other devices may not appear in the actual size. This is not an error.

Playback on other devices (TV, etc.)

Symptom	Explanation/Solution
You cannot view the image or hear the sound on the connected device.	• Connect the audio line of the Audio/Video cable jack to your camcorder or to the connected device (TV, DVD recorder, etc). (Red color- right, White color- left) • The Audio/Video cable jack is not connected properly. Make sure that the Audio/Video cable jack is connected to the proper jack. ➥page 94, 96

Connecting/Dubbing with other devices (TV, DVD recorder, etc.)

Symptom	Explanation/Solution
You cannot dub correctly using the Audio/Video cable.	• The Audio/Video cable is not connected properly. Make sure that the Audio/Video cable is connected to the proper jack, i.e. to the input jack of the device used for dubbing an image from your camcorder. ➥page 94, 96

Connecting to a computer

Symptom	Explanation/Solution
You are trying to play videos and the computer does not recognize your camcorder.	• Disconnect the USB cable from the computer and camcorder, restart the computer, then reconnect it correctly.
Cannot play video clips properly on a PC.	• A video codec is needed to play the file recorded on your camcorder. Install or run the built-in edit software (Intelli-studio). • Make sure you insert the connector in the correct direction, and connect the USB cable to the USB jack on your camcorder firmly. • Disconnect the cable from the computer and camcorder, restart the computer. Reconnect it properly. • Your computer may not have the required performance to playback a video file. Check the recommended computer specifications.
Intelli-studio does not function properly.	• Exit the Intelli-studio application, and restart the Windows computer. • The built-in software on your camcorder, Intelli-studio, is not Macintosh-compliant. • Set **"PC Software"** to **"On"** in the Settings menu. • Depending on your computer, the Intelli-studio program may not run automatically. If this occurs, open My Computer, find and then open CD Drive Intelli-studio. In CD Drive Intelli-studio, run iStudio.exe.
The image or sound on your camcorder is not played on your computer properly.	• Video playback or sound may stop temporarily depending on your computer. The video or sound copied to your computer is not affected. • If your camcorder is connected to a computer that does not support Hi-speed USB (USB2.0), the images or sound may not be played back correctly. The images and sound copied to your computer are not affected.
The playback screen is paused or distorted.	• Check the system requirements to play a video. ➥page 85 • Exit all other applications running on the current computer. • If a recorded video is played on your camcorder connected to a computer, the image may not play smoothly, depending on the transfer speed. Please copy the file to your PC, and then play it back.

General operations

Symptom	Explanation/Solution
The date and time are incorrect.	• Has the camcorder been left unused for a long period of time? The backup built-in rechargeable battery may be discharged. ➥page 28
Pressing a button will not turn on or operate the camcorder.	• Remove the battery pack or unplug the AC power adaptor, and reconnect the power supply to the camcorder before turning it on.
Does not charge or operate even if the battery pack is inserted.	• Check whether the battery pack is genuine. Non-genuine battery packs are not recognized properly by the camcorder.

Menu

<table>
<tr><th>Symptom</th><th>Explanation/Solution</th></tr>
<tr><td>Menu items are dimmed.</td><td>

You cannot select the dimmed menu items in the current recording/playback mode.
Most of the menu items cannot be selected when you set the Smart Auto function.
If there is no storage media inserted, it cannot be selected and will be dimmed on the menu : "Storage Type", "Storage Info", "Format", etc.
There are some functions you cannot activate simultaneously.
The following list shows examples of unworkable combinations of functions and menu items. If you want to use a function listed under <Cannot Use>, do not set the function/setting combinations listed under <Because of the following setting>.

<table>
<tr><th><Cannot Use></th><th><Because of the following setting></th></tr>
<tr><td>"Digital Zoom"</td><td>"Anti-Shake (HDIS)",
"iSCENE: Night, Darkness"
"Digital Effect : Mirror, Mosaic, Step printing",
"Video Resolution: Web Fine, Web Normal"</td></tr>
<tr><td>"Digital Effect : Mirror, Mosaic, Step printing"</td><td>"Anti-Shake (HDIS)", "16:9 Wide"</td></tr>
<tr><td>"Digital Effect"</td><td>"iSCENE: Night, Darkness"</td></tr>
<tr><td>"Focus : Face Detection"</td><td>"iSCENE", "Digital Effect",
"Video Resolution: Web Fine, Web Normal"</td></tr>
<tr><td>"Back Light"</td><td>"iSCENE: Night, Darkness"</td></tr>
<tr><td>"Fader"</td><td>"Time Lapse REC"</td></tr>
<tr><td>"Smart Auto"</td><td>"Video Resolution: Web Fine, Web Normal"</td></tr>
<tr><td>"16:9 Wide"</td><td>"Video Resolution: Web Fine, Web Normal"</td></tr>
<tr><td>"Anti-Shake (HDIS)"</td><td>"Video Resolution: Web Fine, Web Normal",
"iSCENE: Night, Darkness"</td></tr>
<tr><td>"iSCENE: Night, Darkness"</td><td>"Anti-Shake (HDIS)", "Digital Effect"</td></tr>
</table>

The following list shows examples of some functions you cannot activate when the camcorder is in a specific mode. If you want to set the desired function, change the mode first.

<table>
<tr><th><Cannot Use></th><th><If the camcorder is in the following mode:></th></tr>
<tr><td>"LCD Brightness",
"LCD Color", "Demo"
"Transparency",</td><td>"Play mode": Thumbnail index screen or full image display mode of videos (or photos).</td></tr>
<tr><td>"TV Display"</td><td>"Play mode": Thumbnail index screen mode of videos (or photos).</td></tr>
<tr><td>"Storage Type",
"Auto LCD Off",
"Default Set"</td><td>"Play mode": Full image display mode of videos (or photos).</td></tr>
<tr><td>"Beep Sound"</td><td>"Play mode": Full image display mode of videos.</td></tr>
</table>
</td></tr>
</table>

specifications

Model name	SMX-C20BN/SMX-C20RN/SMX-C20LN/SMX-C20UN SMX-C24BN/SMX-C24RN/SMX-C24LN/SMX-C24UN SMX-C200BN/SMX-C200RN/SMX-C200LN/SMX-C200UN

System	Video signal	NTSC
	Picture compression format	H.264/AVC Format
	Audio compression format	AAC (Advanced Audio Coding)
	Recording resolution	TV Super Fine (about 5.0Mbps), TV Fine (about 4.0Mbps), TV Normal (about 3.0Mbps), Web Fine (about 4.0Mbps), Web Normal (about 3.0Mbps)
	Image device	CCD (Charge Coupled Device) (Max : 680K pixels)
	Lens	F1.8 to 2.4, 10x (Optical), 1200x (Digital) Electronic zoom lens
	Focal length	2.4mm~24mm
LCD screen	Size/dot number	2.7 inches wide, 230k
	LCD screen method	1.6" interlaced scan, LCD panel / TFT active matrix system
Connectors	Composite video out	1.0V (p_p), 75Ω, analog
	Audio output	-7.5dBm 47KΩ, analog, stereo
	USB output	mini USB-B type (USB2.0 High Speed)
General	Power source	5.0V (Using AC adaptor), 3.7V (Using Lithium Ion battery pack)
	Power source type	Power supply (100V~240V) 50/60Hz, Lithium Ion battery pack
	Power consumption	1.8W (LCD on)
	Operating temperature	32℉~104℉ (0℃~40℃)
	Operating humidity	10% ~80%
	Storage temperature	-4℉ ~ 140℉ (-20℃ ~ 60℃)
	Dimensions (W x H x D)	Approx. 1.39" x 2.21" x 4.29" (35.2mm x 56.2mm x 109mm)
	Weight	Approx. 0.32lbs (145g) (Except for battery pack or memory card)
	Internal MIC	Omni-directional stereo microphone

※ These technical specifications and design may be changed without notice.

warranty

SAMSUNG
LIMITED WARRANTY

SAMSUNG Electronics America Inc. (SEA), warrants that this product is free from defective material and workmanship.
SEA further warrants that if product fails to operate properly within the specified warranty period and the failure is due to improper workmanship or defective material, SEA will repair or replace the product at it's option.
All warranty repairs must be performed by a SEA authorized service center. The name and address of the location nearest you can be obtained by calling toll free: 1-800 SAMSUNG (1-800-726-7864).
Labor
90 days carry-in
Parts
1 year

On carry-in models, transportation to and from the service center is the customer's responsibility.

The original dated sales receipt must be retained by the customer and is the only acceptable proof of purchase.
It must be presented to the authorized service center.

EXCLUSIONS (WHAT IS NOT COVERED)

This warranty does not cover damage due to accident, fire, flood and/or other acts of God; misuse, incorrect line voltage, improper installation, improper or unauthorized repairs, commercial use, or damage that occurs in shipping.
Exterior and interior finish, lamps, and glass are not covered under this warranty.
Customer adjustments which are explained in the instruction manual are not covered under the terms of this warranty.
This warranty will automatically be voided for any unit found with a missing or altered serial number. This warranty is valid only on products purchased in the United States and Puerto Rico.
Some States do not allow the exclusions or limitations of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.
This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.

QUESTIONS OR COMMENTS?

COUNTRY	CALL	OR VISIT US ONLINE AT	WRITE
IN THE US	1-800-SAMSUNG (726-7864)	www.samsung.com	Samsung Electronics America, inc. 85 Challenger Road Ridgefield Park, NJ 07660-2112

RoHS compliant

Our product complies with "The Restriction Of the use of certain Hazardous Substances in electrical and electronic equipment", and we do not use the 6 hazardous materials- Cadmium(Cd), Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr +6), Poly Brominated Biphenyls (PBBs), Poly Brominated Diphenyl Ethers(PBDEs)- in our products.